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AGRICULTURAL COLLEGE AND EXPERIMENTAL FARM.

To the citizens of Maryland and contiguous States:

The Maryland State Agricultural Society, for the more effectual furtherance of the purposes which gave it birth, has determined to establish, in connexion with an *Experimental Farm*, an educational institution, to be entitled the "*Agricultural College of Maryland.*"

On the undersigned—a Committee of that Society—has devolved the duty of submitting to you a sketch of the features and design of the proposed institution, and of invoking your co-operation by pointing out its capacity for wide-spread usefulness, and the urgent need of some such movement to enable our favored land to keep pace with that progressive material developement which is a marked characteristic of the present era of civilization, and reacts so powerfully on the moral and intellectual state of the nations in whose midst this activity prevails. Our Society seeks to raise by subscriptions to stock in shares, of the par value of twenty-five dollars each, not less than one hundred thousand dollars. With a portion of this sum, a farm of between two and five hundred acres, less than ten miles from Baltimore, is to be purchased. With the residue of the funds, besides the necessary buildings and outfit for the farm, commodious and appropriate structures for the accommodation of the instructors and pupils of the College, are to be erected, professorships to be endowed, and the grounds and fixtures requisite for holding the annual exhibitions of the Agricultural Society, on a scale hitherto unrivalled in this country, enclosed and prepared. The title and control of the property so acquired and improved is to be vested in a Board of Trustees, composed of the President of the Maryland State Agricultural Society for the time being, and fourteen persons to be chosen by the holders of a majority of the shares of stock, represented at each annual meeting of the stockholders.

This board will employ an intelligent and skilful practical farmer, and appoint to professorships of the natural sciences and such other branches of knowledge as have an important bearing, direct or indirect upon the usefulness of the proprietor of land, or the conductor of agricultural operations, the best qualified persons whose services can be procured.

A code of rules and regulations for the College and the farm, together with by-laws defining their own powers and specifying the functions and compensation of all subordinate officers and assistants, framed by the first elected Trustees, when approved by the stockholders, with or without amendment, will constitute the chart by which the institution is to be directed and managed. This code will of course be susceptible of revision and alteration by a process similar to that of its formation. It will prescribe the qualifications in applicants requisite to obtain their admission as pupils, the routine of study and labor, with the course of discipline to which they will be subjected, and the charges for board, tuition, and contingent expenses. In it the conditions upon which the Maryland State Agricultural Society shall be entitled to hold their annual exhibitions and fairs on the farm, will be determined, and all the minutiæ incident to the organization of an institution of this complex character, arranged and harmonized. To enter into these details would be foreign to the province of the undersigned. Very much will depend upon the character and fitness of the Trustees whom the stockholders may elect, and still more, perhaps, upon the views of the stockholders themselves.

But the committee conceive they do not transcend their commission when they announce the following features as in the estimation of the projectors of this foundation, proper to be embodied in its fundamental ordinances.

1st. Ample provision for both theoretic and practical instruction of the pupils in all those branches of knowledge and art immediately connected with agricultural pursuits in this or the adjoining degrees of latitude, so as to fit the graduate for taking charge of and successfully conducting any and every department of husbandry.

2nd. Restriction of the privilege of matriculation to youths of suitable age (say over fourteen, and under twenty-one years,) physical vigor, mental capacity, and good moral character, who are already well grounded in at least all the elementary rudiments of what is termed an "English education."

3d. Requirement of security for the payment of board and contingent expenses, including cost of suitable wearing apparel, from all the students, and for discharge of tuition fees by those who do not represent the free scholarships, to which the holder or combined holders of forty shares of stock are to be entitled.

4th. A course of discipline sanctioned by adequate penalties and rewards, at once comprehensive and exact, competent to develope and pass the morals, mental and physical powers, to form good citizens, as well as skilful farmers, to render the scholars not only ardent in the pursuit of knowledge, obedient to those placed over them, and decorous in demeanor, but likewise cheerful and happy under a sense of their peculiar advantages, by paternal kindness of treatment, by the introduction of every proper species of amusement, and the allowance of all meet relaxations.

5th. Such a direction of the resources of the farm as will contribute as much as possible, with subservience to its primary object of affording to the students practical experience and the opportunity of witnessing important scientific experiments, to the income of the institution.

6th. A limitation of the rate of dividends which may be declared out of net profits to the rate of six per centum per annum.

7th. Provisions for the free and permanent occupancy by the Maryland State Agricultural Society of the grounds and appurtenances allotted for its annual exhibitions, with the stipulation that the said Society will keep in good repair this allotment out of the proceeds arising from these spectacles, and will hand over the residue of such proceeds after defraying the expenses incurred for the premiums awarded to exhibitors, to the Trustees, for the benefit of the Institution and its stockholders.

From the foregoing synopsis of its plan, you will at once perceive that the original and main design of our institution is by a systematic combination of scientific with practical and moral training, thoroughly to educate the rising generation of agriculturists, to produce a corps of enlightened, well disciplined and eminently practical farmers; their minds stored with all the resources accumulated by science and experience for the prosecution of their art; their perception and skill sharpened and developed by the continuous conjunction, under their observation, and with their participation of the ordinary processes of tillage and the usual routine of rural economy, with the suggestive commentaries of inductive science and the light shed upon the future pursuit by the researches and discoveries of all ages and nations. All that relates to the vastly diversified calling of the husbandman, every species of knowledge and dexterity likely to enable the proprietor or manager of an estate to sway, improve, beautify and render profitable the domain, population and brute animals over which he is to preside, is embraced in our comprehensive scheme. Even as our armies are organized, equipped and led to almost certain victory by the élèves of West Point; just as our naval marine is being prepared by the instrumentality of the Annapolitan Academy, to throw into the shade the brilliancy of its former glorious career, and regain that prominence which the scientific schools of England and France had well nigh transferred to our rivals, do we propose to train and place at the head of the rank and file of our tillers of the soil, leaders who are worthy and competent to conduct to unprecedented achievements over natural difficulties, and beneficent triumphs over ignorance and prejudice. Although designed to act directly on its chiefs and leaders, our college will tend obviously to elevate the character and ennoble the condition of that much neglected division of our population which is numerically so far predominant over all others. For by the comparatively small number of highly instructed men who will issue from our Seminary, the seeds of improvement and advance will be disseminated far and wide over our hills, plains and coasts.

Having imperfectly set forth the features and design of the proposed Agricultural Institution, we now ask your attention to reasons which have induced us to believe such an establishment imperatively called for by the condition of agriculture in this region, and by the benefits which it would diffuse among all classes of the community, urban as well as rural. A retrospective glance, may, perhaps, aid us in bringing our views more plainly before you.

Be pleased then to cast your eyes back to the period when under the auspices of the gallant Raleigh, the wise Penn, and the liberal and far sighted Calvert, Virginia, Maryland, Pennsylvania and Delaware were occupied by the pioneers of our trans-Atlantic forefathers.

From the date of the settlement of Jamestown to the announcement of our war of independence, the current of immigration which set steadily, with but transient interruption, across the ocean, to the shores of the Chesapeake and Delaware, constituted a population almost exclusively agricultural. The hitherto unturned and virgin soil, ripe with accumulated fertility of untold centuries, yielded profuse returns to slovenly and reckless cultivation.

Drawing their supplies of food with but slight exertion or forethought from the exuberant earth, the extermination of the primeval forests and nomadic aborigines, defence against the unaccustomed climate and the hostile French, the turmoils incident to new communities and their unprecedented relations with the parent State, occupied the energies and engrossed the cares of the colonists. The art of agriculture rapidly declined. For this, two prominent causes may be adduced—One, the imagined inexhaustibility of the soil—the other, its almost boundless extent as compared with the competitors for its possession—where the luxuriance of vegetation far surpassed what had been witnessed by the cultivators at home, and exceeded the most sanguine expectations, it seemed frivolous to seek for means by which still greater abundance could be produced, especially as the compulsory absence of manufacturers and the mechanic arts, together with the limitations imposed on commerce by jealous England, deprived our ancestors of the scope in the exchange of their surplus products for the conveniences and luxuries of life.

Before deterioration of the soil furnished an incentive for research into the causes of this decay and the means of renovation, the generation of original emigrants from the old countries had in great part passed away, and with them such knowledge and skill as they possessed. Their descendants, leading a life of self-indulgence, and utterly devoid of a true conception of the causes of, and remedies for their impoverished condition, had before them two alternatives. They might either struggle for a meagre subsistance on their exhausted patrimonial estates, or remove to the yet untasked and wasted

fully fertile regions which from time to time were alluringly brought into view by our newly organized government, anxious to extend and strengthen its frontiers in the distant South and West—under these circumstances, it is by no means marvellous, that the more enterprising and sagacious of our rural population deserted the graves of their fathers, and the play grounds of their youth. In this exodus was embraced the vigorous and available portion of that servile race by which agricultural labor was then for the most part performed. Behind were left the aged, the indolent, the apathetic and the ignorant! There still remained (except in Pennsylvania) a sufficient proportion of slaves to discourage the ingress of free labor from the North, and from abroad! There still remained the impoverished possessors of large landed estates, without capital, without thrift, and without the knowledge how to better their condition.

Whilst sunken thus to a low ebb, agriculture became stagnant, and almost lifeless; commerce and the mechanic arts, favored by more auspicious circumstances, were progressing with giant strides.—The singular anomoly was presented of an accelerated rapidity in their advance in the midst of the steady decay of that great fundamental pursuit on which all others are based. The resources of science, so freely pressed into the service of navigation, and the handicraft of the citizen, were not applied, or even thought applicable, to the cultivation of the earth. A deep prejudice against rural life was generated by its untoward state. All provident and wise parents among the landholders and farmers, sought to transfer to the so called liberal professions, to the walks of trade, or to the shop of the mechanic, their more promising and intelligent sons, keeping at home for the plough-tail and the farm, those only who were deemed too stupid to receive an education, and who were considered by reason of that very thick-headedness, better adapted for their intended occupation.

Under this state of public opinion and procedure, it is not surprising that a vast area lapsed into abandoned and barren wastes; that the aspect of the once luxuriant plains bordering on our tide-waters, became so hideous as to be a bye-word and a reproach; and that the "clodhopper," as the dweller on desolate "old fields" was ignominiously termed, was sneered at and despised by the more prosperous denizens of the mart of commerce, and the sites of manufacturing industry. Oases in the wide-spread desert, certain valleys and districts, blessed with more enduring fertility of soil than the remainder, continued to afford remunerative returns to the toil of the plodding tiller, and relief from the dreary desolation elsewhere pervading our limits.

For a long time this downward course of the waded interest continued unabated. At last however, the influx of immigration having penetrated the interior far beyond the banks of the Mississippi, ceased to draw within its vortex the flower of our rural population; and, altho' it continued to flow onward with unabated tide, it gradually deposited on the shores of the Chesapeake and Delaware a sediment of labor which tended measurably to fill the vacuum produced by the exodus before mentioned. This deposit was due to the growth of the mercantile, manufacturing, and mechanical population of the sea-board. Swelling cities, and multiplied manufacturing hives, created in our midst a vastly enhanced demand for those perishable products of the soil which will not bear prolonged transportation, even at the accelerated pace provided by modern locomotion. The need and profit of renovation of the soil in the vicinity of these foci of consumption, drew capital and energy to this re-opened field for enterprise. The spirit of investigation began to be turned to the causes of the deterioration of the soil, and the most feasible means of restoring its productiveness. Such imperfect knowledge as existed on the subject was ere long diffused by publications and associations of farmers. Much was learned from recent agricultural immigrants, who now frequently stayed their steps, where the high prices of the fruits of their labors more than compensated for the sterile condition of the acres which they had to enrich, before looking for returns. Coming as they had done, from countries where the pressure of dense poulation upon the means of subsistence, had stimulated the efforts, and rendered necessary the assiduity of producers of food, they brought to our aid, at least stubborn industry, and patient perseverance. Lessons were drawn, too, from the North-eastern section of our country, where an unkind climate and rugged soil, operating upon a hardy and intelligent race, had given rise to unwonted activity of invention, and a keenness in turning circumstances to account, of which the history of the world afforded no parallel.

This resurrection of life and activity, (horticultural rather than agricultural in the onset,) originating, as it did, almost in the suburbs of the city, and the approaches to manufactories, spread gradually until it embraced a large population of the more intelligent country gentlemen of this and the adjoining States.

It being demonstrated that exhausted land could be restored to its original fertility, and even made to surpass its pristine productiveness with profit, an eager spirit of improvement seized upon the young and sanguine. In many cases brilliant success attended this revival of thrift and intelligence. By accident, or from European experience, several important renovators of the soil were discovered or adopted. Improved implements, vehicles and modes of tillage, came rapidly into use, and the heavens seemed bright to the enthusiast, who followed one after another in the path so invitingly opened to them. But there was a deep seated error in this rash precipitancy. Many were wrecked by a heedless reliance upon the dogmata of sciolists—others by a blind imitation, without regard to the endless diversity of soil, climate and circumstances. Because, in certain localities, the application of common lime had been found to restore fertility, all the agricultural world began to look upon lime as a panacea. Because the Morus Multicaulis was recommended in the public prints, thousands were induced to embark their means and industry in this disastrous project for rearing the silk worm. Multiplied instances of the same kind might be given. The waste of capital and labor, and the distressing embarrassment thus incurred, brought undeserved reproach upon what was invidiously termed "book farming."

But the results of this agitation and awakened intelligence, have in the end been good. By the promotion of societies similar to our own, by the multiplication of experiments and their communication to the public, and by the collision of intellect in the maintainance of adverse, tho' generally visionary theories, a considerable aggregate of use-

ful information has been acquired, and a vast amount of individual experience gained. Chief among the advantages of this awakening of our agriculturists to new life, we count their discovery of their pervading ignorance, and urgent need of enlightenment. Science invoked at last, has not disdained to shed its light upon our art, and with some beneficial consequences, diminished however by the intrusion into its sphere of presumptuous characters, and by the incapacity of most agriculturists to avail themselves of its truths. Still the value of this species of knowledge is now deeply felt by a large class, and its rarity lamented. At the same time it is perceived that, in order to obtain full efficacy, there must be a combination of practice, with science, or to speak more clearly, that science must be applied to the practice of agriculture experimentally, and not abstractly. The same method must be pursued in preparing a youth for agricultural, as for any other pursuits. He must undergo a training in which the practical part of his occupation is taught him by actual performance, whilst the laws of nature, and the reasons for different processes are expounded to him, in full view of illustrations daily before his eyes. It is to this combination of instruction with practice, this special training, for a particular pursuit, that modern progress in the useful arts is due. Thus we have Mechanics' Institutes, where the apprentice has unfolded to him, the principles of science, bearing on his art, while he is daily acquiring manual skill in the contiguous workshops.

In those districts of England and Scotland, where systematic agricultural education has been long enough in operation to have manifested its legitimate consequences, the effect has been almost magical. Insalubrious marshes, converted into salubrious plains, bleak moors into fertile farms, and the most forbidding and desolate regions into the smiling landscape of a pastoral paradise, attest the possible dominion, too often dormant, of mind over matter. In a part of the world, where all the avenues to success in life, are thronged with eager competitors, the graduates of agricultural academies are in universal request, and at once find situations, at rates of salary far exceeding those paid to their old fashioned compeers. That this preference has continued to increase and widen, speaks volumes.

Before the institution of these Seminaries in Great Britain, it was not unusual for persons, anxious to prepare their sons for the management of landed property, to place them in the families of intelligent and skilful farmers. For the advantages and instructions thus obtained, as much as £100, or $500 per annum was frequently paid. And, at such rates, lads, from this side of the water, have been domiciled with distinguished Scotch Farmers. But since Agricultural Academies have been in successful operation, these have been found to unite far greater advantages than could be derived from the best private farmer, whose interests would be sacrificed by repeating experiments already sufficiently tested, and whose farm, previously in a state of efficient organization, could not, without serious interruption, exhibit the preparatory steps by which this excellence had been attained. Moreover, by the engrossing nature of his occupation, in the most busy and important seasons, he would be deprived of the opportunity of giving such instructions and explanations to his students as would impress upon them the rationale of his proceedings, and the change of methods proper to be adopted under different circumstances.

It is not to be denied that an apprenticeship of this sort would be highly advantageous in the absence of any preferable means of instruction, and any one who attempts in mature years to become a farmer, will have reason to regret the want of that early conversancy with details which cannot so well be acquired in after life. It is, however, a deplorable fact that if we were disposed to adopt the alternative of apprenticeship, we would find among us very few farmers qualified to undertake the task. It is to fill the void left by the almost total absence of this class of men that our College is designed.

In England, no investment is more safe or more sure to pay a fair interest than arable land, in spite of its high price and heavy burdens. For this the only reason which can be assigned is the existence in that country of a class of educated and well trained farmers, ready to associate their skill with the resources of the capitalist, and able, by such aid, to develop to a very high point the productiveness of the soil. Here, on the contrary, it is notorious that such investments are almost certain to be profitless, unless the purchaser is himself a practical agriculturist. If we had among us a sufficient number of individuals, competent to conduct agricultural operations in an enlightened manner, how soon would the environs of our cities, and even more remote parts of the country, be embellished and fructify abundantly by the devotion to this purpose of the accumulated capital, in the hands of retired merchants, professional men and others, who might wish to spend the evening of their days in the quiet shades of rural life, or at least to indulge the almost universal passion for reveling over a domain of wide acres.

We have cited the example of England, rather than of continental Europe, in this connexion, because in the latter, Agricultural Institutes, where they exist, are like all other institutions, directly dependant on, and sustained by the government. In England and Scotland, on the other hand, these foundations emanate from voluntary associations of those interested in the welfare of agriculture. Their greater success has been commensurate with the superiority of the voluntary system over the antiquated contrivance of management by government officials. In the one case, the controllers and proprietors consist of those whose efforts and wakefulness are stimulated by their own keen-felt interest. In the other, the salaried subordinates of the ruling power, devoid of identity of interest with those they supervise, exhibit that listlessness and unwillingness in progress which always marks a bureaucracy. It seems, therefore, the part of wisdom so to organize our educational institutions, that their guardianship shall be confided to those whose best hopes are involved in their success. On this basis do we propose to rest the destinies of our Agricultural College. Any aid which may hereafter be extended to us, by State or Municipal authorities, will of course, be gratefully received, but we do not design to entrust the control of our institution to any, except those who necessarily must consider its welfare inseparable from their own.

It is our deliberate expectation that such of the graduates of our proposed institution, (if happily a discerning public shall decree its establishment,) as are not land owners themselves, will, as managers for, or employees of extensive proprietors,

otherwise occupied capitalists, command recompense, at least equal to that which the same amount of talent and acquirement would yield in any other pursuit. It is believed indeed, that such is the dearth of men competent to conduct advantageously, farms on an improved system, that an education completed on the plan proposed, would constitute a resource much more certainly reliable as a means of honorable livelihood, than any of the already overcrowded professions. Ranking intellectually, as well as in emolument with other educated classes, the Alumni of the Agricultural College of Maryland will not lose caste, because they pursue the calling of a Washington and a Cincinnatus.

We inhabit a portion of this continent, unsurpassed in natural advantages and offering rarely equalled facilities for its transformation into one of the most admirable and enchanting abodes of the human race. The two magnificent estuaries, which penetrate far into the interior, and particularly the noble Chesapeake with its hundred arms; bear in their bosoms the choicest aquatic productions, and afford easy and secure access to the very doors of many of our rustic homes. Our mineral resources are incalculable, and the spontaneous productions of our forests invaluable. The diversified surface of our upland regions, watered by numerous fine streams, which descending from the Alleghanies and their subordinate heights, answer so many beneficial purposes, abounds in capabilities and pristine loveliness. There is no territory, the aspect of which could be brightened and its fecundity multiplied with less exertion, by properly directed skill. How much might be added to the wealth and physical well being of our citizens by a more perfect system of agriculture, in its various departments, it is hard to predict. How immense-ly the beauty, salubrity, and general attractiveness of this, our even now, comely patrimony, might be enhanced by the introduction of a highly educated and well disciplined corps of agriculturists, it is more easy to imagine than portray.

Provide for the rapid elevation in knowledge, refinement, and skill of the denizens of our rural homesteads, and you will give a greater impulse to all that is desirable in civilization than any means you could adopt. You will not, we trust, hesitate when your own welfare so manifestly beckons you on!—No! all classes and occupations will vie with each other, as to which will contribute most to that which promises such benefits to all! The time will come, when to be a Maryland farmer, will be as significant as it once was to belong to the "Old Maryland Line."

RAMSAY M'HENRY,
JNO. C. BRUNE,
WM. W. GLENN.

Injury to the Rice Crops.—In addition to the particulars already given, we learn that the damage to the Rice crops in South Carolina has been as great as in Georgia. The fields on Combahee river were six feet under water, in many places, and the crops along that stream and the western branch of the Cooper river have suffered greatly. The damage was immense also on the Carolina side of the Savannah river as far up as Laurel Hill and Barnsbie landing. The salt water was carried up to those points, and all the cut rice was floated off. The injury to banks and canals has been great throughout Carolina.—*Savannah Republican.*

Sale of Stock in Ohio.—At a recent sale of Stock in Ohio, by the Clinton County Importation Company, the following was the result; the cost up to the day of sale, was $17,000, while the sales foot up $22,661—all the the purchases were for Ohio farmers, viz:

SHORT HORN BULLS.

1.	Wellington—H. H. Hankins & Co., Bloomington,	$3,700
2.	Warrior—M. B. Wright, Jeffersonville,	1,200
3.	Alfred—David S. King, Port William,	800
4.	Whittington—Solomon Brock, Jeffersonville,	900
5.	The Marquis—W. Bently, Bloomington,	625
6.	Duke of Cornwall—D. P. Quinn, Sabina,	700
7.	Billy Harrison—Jesse G. Starbuck, Wilmington,	1,500
8.	Moonraker (calf)—Thomas Conner, Buena Vista,	400
9.	Lord Rain, 2d (calf)—Daniel Early, Port William,	195
10.	Young Sir Robert (calf) W. McMillan, Wilmington,	250

COWS.

1.	Duchess—M. B. Wright, Jeffersonville,	$1,675
2.	Emma—David Persinger, Sabina,	750
3.	Hope—William Palmer, Bloomington	1,000
4.	Miss Shafto—Jesse G. Starbuck, Wilmington,	650
5.	Dairy— " " "	475
6.	Familiar—Jesse Pancake, Frankfort,	550
7.	Sunbeam—Thos. L. Carothers, Wilmington,	500
8.	Young Emma—A. Rombach, Wilmington,	300
9.	Miss Walton—John Hadley, Clarksfield,	395
10.	Princess—Hadley & Hawkins, "	1,060
11.	Moonbeam—Henry Kirkpatrick, Jeffersonville,	500
12.	Lady Jane—David Watson, Milford Centre,	225
13.	Lady Whittington—W. Reed, Bloomington,	300
14.	Strawberry—James Fullington, Milford Centre,	675
15.	Louisa—James R. Mills, Bloomington,	300
16.	Jessamine—J. O. B. Renick, Shadeville,	475
17.	Victoria (no pedigree) D. Persinger, Sabina,	1,000
18.	Queen (calf of Victoria)—H. S. Pavey, Leesburgh,	425

SOUTH DOWN SHEEP.

1st Buck	—R. R. Seymour, Bainbridge,	$120
2nd "	—Thomas Blackstone, "	95
3rd "	—Jeptha Perrill, Bowensville,	100
1st Ewe	—Thomas Blackstone, Brainbridge,	70
2nd "	—R. R. Seymour. "	70
3rd "	—Thomas Blackstone, "	60
4th "	—H. S. Pavey, Leesburgh,	55
5th "	—John Hadley, Clarksfield,	70
6th "	—Thos. Blackstone, Bainbridge,	55

THE COTSWOLDS.

1st Buck	—Jeptha Perrill, Bowenville,	$70
1st Ewe	—Thos. Blackstone, Bainbridge,	85
2nd "	—R. R. Seymour, "	85

SHEPHERD DOGS.

A dog, slut and five pups were sold. John Hadley, of Clarksfield, bought the slut for $51, and one Pup for $36. The Dog was sold to A. R. Seymour for $30, and the other Pups for $19, $12, $12 and $10,50 each.

WORK FOR THE MONTH.

OCTOBER.

The unprecedented drought, that has prevailed so long during the present season, having prevented the ploughing of the wheat ground, much of that labor we fear will still have to be done, and, consequently, the seeding of wheat put back many weeks. In view of these facts, we would respectfully advise our agricultural friends to prepare their grounds, and get in their seed wheat as early as possible, and to be sure to give full supplies of guano, or other animal manures, so as to impart an early and vigorous start to the plants, in order that they may be the better able to withstand the frosts of winter. In connection with the

SEEDING OF WHEAT.

On sound lands, we would remark, that it is essential to success, that deep ploughing and thorough pulverization of the soil be observed. And we will add, that subsoil-ploughing, where practicable, would prove a valuable auxiliary process. During the present season, we have closely watched the various notices which have appeared in the newspaper press, in relation to the character of the corn crop, and the effect of the drought upon it, as also, in regard to the manner in which the land had been prepared. In several instances, we have read of adjoining fields, where on the one field, which had been ploughed *shallow*, the leaves of the corn plants were curled and literally burnt up, the ears small and badly filled, and promising not more than a fourth of an average crop, while on the adjoining field, which had been *ploughed deep*, say from 7 to 10 inches, without any superiority of soil, manuring or culture, comparatively good and luxuriant crops of well filled ears were growing. Now, why this difference in prospective produce? Simply, because of the greater depth to which the land had been ploughed, enabling the plants to draw moisture to a greater depth from the earth, and to extract from the atmosphere a more bountiful supply of organic food; perhaps the wheat grower may conclude, that, as the crop thus benefitted was *corn*, it has no connection with *wheat*; but if he should so conclude, he will do so erroneously, as the latter crop will be just as much favored by deep ploughing as the former; for it is known that the roots of the wheat plant will penetrate the earth to the depth of three feet, and it is consonant to reason, that the farther the soil may be subject to the meliorating influences of the atmosphere, the more beneficial will its effects be upon the growth of the plants. There is another good effect to result from deep ploughing, as well as from thorough pulverization, it is this, such preparation operates as a partial exemption from winter-killing, as the drier the soil lays in winter, and early spring, the greater certainty is there against the injurious effects, of the upraising of the earth from thawings.

As a specimen of hundreds of other paragraphs that have met our eye during the last six weeks, we give the following, which appeared in the *Louisville Courier*, of the 2d September. It contains, in itself, a most happy illustration of the salutary effects of deep ploughing, and subsoiling, which we trust will commend the practice to those of our readers, who may have heretofore been opposed to the practice. But we feel it to be our duty to emphatically state, that *wet* grounds will not be benefitted by either deep ploughing or subsoiling, and that before such lands can be advantageously subjected to either process, they must be *drained*, and time allowed, say one year be permitted to intervene, to permit the surface soil to be relieved from an excess of water:—

"We were shown yesterday a letter from a gentleman who has recently travelled through Indiana, Ohio, and portions of Kentucky. He says that, so far as he went in Indiana and Ohio, the prospect for the corn crop is gloomy indeed; many of the fields would not produce five bushels to the acre, whilst some of the farmers were cutting up their corn, in order to make fodder for winter.—He further states that in passing through the farm of Wm. P. Diltz, Esq., living about forty-five miles above Cincinnati, in Bracken county, Ky., he saw one hundred and twenty acres of extra corn fields, the ears of which were large and well filled, and must make seventy-five bushels to the acre. Mr. Diltz attributes his success this year to the fact of his having broken up this land very deep with a sub-soil plow, the consequence of which is that the drought did not have the same effect as upon shallow plowing."

RYE.

This crop should have been seeded in August; but it may be put in any time this month up to the 15th, provided the land have a good dressing of animal manure, be ploughed deep, and pulverized thoroughly. The ground being ploughed, harrowed and rolled, then sow 5 pecks on each acre, harrow and cross-harrow the seed in, then top-dress with a mixture of 5 bushels of ashes, 2 bushels of salt, and 1 bushel of plaster, per acre; this done, make your water-furrows, and roll across them.

THRESHING OUT WHEAT.

Thresh and clean your wheat so as to have it ready for market. Watch the prices well, so that you may avail yourself of every improvement in them, and not permit the fruits of your labors to go into the pockets of speculators who neither toil nor spin, nor add a dollar to the wealth of the nation, and whose only desire is to enrich themselves by the labors of the producing portions of the community.

MANAGEMENT OF HOGS.

As we have a good number of new subscribers, who have added their names to our list since then, we know not how we can better subserve their interests as well as that of our old subscribers, than by substantially transcribing the remarks we made upon this subject in our journal for October, 1841, and adding such as may appear opportune to the occasion.

As the time is approaching when it will be necessary to put your hogs up to fatten, we propose, in order that you should make the most economical use of this part of your *farm economy*, that you should prepare for your fattening swine a good covered shed, or pens, with plank floors for them to sleep on, as well as to be fed in. This shed or pen, should be divided into two apartments—the one for *feeding* in, and the other for *sleeping* in. Attached to it there should be an enclosed yard: its size to correspond with the number of your hogs. Over this yard spread rough materials, as marsh-mud, river-mud, woods'-mould, ditch-scrapings, soil from headlands, or any kindred substances, to the depth of 10 or 12 inches. Let these rough materials be so placed as to present a dish-like form, somewhat deeper at the centre than at the sides.

so as to prevent the running off of the liquid voidings of the hogs. Over this, twice or thrice a week, sow plaster or pulverized charcoal, or pour a solution of copperas made in the proportion of 2 lbs. of copperas to 10 gallons of water, to prevent the escape of ammonia. Every two weeks after your hogs are put up for fattening, clean out your yard, and put in an equal quantity of other rough materials. Continue this practice until you kill your hogs, and you will be able from 20 head of fattening swine, if you keep the manure thus made out of the weather, or so pack it up in bulk as to turn the rain water as it falls, to manure as many acres of land next spring. This is not an exaggerated statement, and will not be so considered by those who reflect that there are in every 100 lbs of hog urine, 5.64 of *Urea*, and that in the solid dung there is 3 lbs. of *Urea*, which by decomposition yields so much ammonia, and that the mixed manure yields in every 100 lbs. 12 lbs. of *Potash*, 12 lbs. of the *Sulphate of Soda*, 19 lbs. of the *Phosphate of Soda*, and of *lime* and *Magnesia*, 8 lbs. 8 oz. We say then, that those who reflect that the excretions of fattening hogs are thus rich in the elemental food of plants, will not consider what we say in behalf of the value of their voidings, as manure, to be in the least exaggerated. Especially will they come to this conclusion, when they reflect, that the hog makes as much manure as almost any other animal, and that when combined with the rough material with which the yard is recommended to be covered, it persuades the latter into decomposition, and converts it, also, into the food of plants.

In speaking of the virtues of the manure of fattening swine, Dana remarks, that Boussingault found in hog-dung nearly as much nitrogen as in horse-dung, while according to the experiments of Schwerts it appears superior to that of the cow. Dana, when estimating the value of the liquid and solid manure of the hog, says :— "The manure of the penned animal is always combined with his liquid evacuations. This gives hog manure a value which places it with night-soil. He then states, that a recent analysis of human excrement has been made by Fleitman in Rose's Laboratory. The feces of a young man in health for four days, dried at 212° F., weighed 2607 grains, or nearly 6 ounces. In 100 parts of the salts or inorganic constituents,* were

Chloride of Sodium, (common salt,)	0.58
Chloride of Potassium,	0.07
Potash, and hydrate of Potash,	22.47
Soda,	0.75
Lime,	21.36
Magnesia,	10 67
Peroxide of Iron,	2 09
Phosphoric acid,	30.98
Sulphuric acid,	1.13
Silica,	1.14
Carbonic acid,	1.05
Sand,	7.39

The potash existed in combination partly with an organic substance in the feces, which acted as an acid. The quantity of phosphate of magnesia is remarkable, and all the phosphates are composed of three of base to one of acid.

The urine was separately collected. Its organic salts exceeded daily more than six and one-third times those of the solid feces. Now the mixture of urine and feces, the fluids and solids, are known under the name of night-soil. No substance is more varied in composition, depending as it does upon the food and habits of those whose accumulations are removed from their usual receptacle. A French farmer found to his cost that the night-soil of a Parisian restaurateur was much superior to a Parisian military barracks. The former was a very rich manure, the latter almost worthless.

Hog-manure, in its character, approaches night-soil sufficiently, to be ranked with it for the present purpose. It is the manure of fattening swine only which is to be classed with night-soil. The estray and running animals produce only a cold manure of little value.

If the manure of fattening swine is to be classed with night-soil as a fertilizer, and we have the very best authority for thus appreciating it, no one can doubt for a moment that it is eminently worth the while of every fattener of swine to preserve both their liquid and solid evacuations, and as we know it may be effectually done in the way we have pointed out, we call upon those of our readers, who may have hogs to fatten, to take prompt measures to economise this rich source of fertilization.

ENCOURAGING THE HOGS TO WORK.

While the hogs are undergoing the process of fattening, corn should be scattered daily over the surface of the yard to induce them to root for it; in so doing they will turn over and mix the excretions of the hog, liquid and solid, with the rough materials, and thus aid in the absorption of the former by the latter.

MANAGEMENT OF THE CONTENTS OF THE HOG-YARD.

The material from the hog-yard, whenever cleaned out, should be thrown into bulk, in such form as will turn water, viz: into a conical shaped pile, the mass as being thrown into bulk should have fresh portions of plaster or ground charcoal intermixed with it. The pile when formed should be freely dusted over with plaster or powdered charcoal, and then compressed with the back of a shovel or spade.

TREATMENT OF THE HOGS.

When the hogs are first penned up for fattening, they should, for three or four times, at intervals of a day apart, have mixed with their food—which should be *soft*—in the poportion of a *teaspoonfull* of *Flour of Sulphur*, and half a teaspoonfull of *copperas*, for each hog.

THEIR FOOD.

The food of the hogs for the first week or ten days should be mainly pumpkins, roots, apples or vegetables of some kind, mixed with a small portion of corn meal, which should be cooked. As the feeding progresses, increase the quantity of meal. During the last three weeks of the fattening the hogs should be fed exclusively upon cooked corn meal.

OF THEIR BEDDING.

The sleeping apartments of the hogs should be well bedded with clean straw, or fresh leaves, once a week. The hog though denounced as a dirty animal, is in fact a cleanly one, delights in a clean soft bed, and will thrive all the better for such attentions to his wants and comfort. The old bedding as cleaned out should be spread over the hog-yard to be commingled with the general mass of rough materials.

*The sand was supposed to have been swallowed during the time the young man was in exercise in the fields near Berlin. It is also rich in the elements of nitrogen.

FURNITURE OF THE HOG-YARD.

Each yard where hogs are being fattened, should be provided with a *Rubbing-post* for the hogs to rub themselves against, and a *trough*, in which there should, at all times, be kept *charcoal*, *rotten-wood*, ashes and salt.

TIMES OF FEEDING.

The hogs should be fed thrice a day at the same hours, viz: *early morning*, *noon* and *evening*, regularity in the hours of feeding being indispensable to success in fattening.

TIME OF PENNING HOGS.

So long as the nuts of the *oak*, the *beech*, and the *chestnut* are plentiful in the woods, so long may the hogs remain abroad, as they delight in this kind of food and fatten on it; but whenever this description of food becomes scarce, the hogs should be penned up, as after they begin to fatten they should never be permitted to fall off—from the moment they begin to take on fat, *onward* should be the word until slaughtered.

WASHING THE TROUGH.

It is a good practice to have the hog troughs washed daily, it keeps the trough sweet, and the hogs eat their food with a better relish.

MANAGEMENT OF CATTLE YARDS.

There are no truths better established in agricultural science than these:—In proportion to the quantity of organic remains which may be in a soil, so is its power of attraction and retention increased or diminished: a soil well filled with organic remains has a greatly increased capacity over one deficient in these substances, of attracting, condensing and retaining organic food from the atmosphere, provided its preparation be such as to favor these purposes.

Such being the case, interest and duty both combine, to point out to every observing farmer, the propriety of converting into the food of plants, everything on his farm or plantation, susceptible of such conversion, without regard to the expense or time it may involve or take; for there can be no question but that he will find his fields generously repay him for his outlays, by a return of principal and interest—aye with compound interest, through their increased productions and improvement of their qualities. And as we know no place where the rough materials which we shall hereafter name can be more certainly transformed into the food of plants than the cattle yards, we recommend to our readers, before they confine their stock in their yards this fall, to cover the entire surface some ten or twelve inches deep with rough materials of some kind, as peat, marsh mud, river mud, seaweeds, ditch scrapings, road scrapings, leaves and woods' mould, mould from headlands and fence corners, pine shatters, cornstalks, coarse grass from the marshes, weeds, &c., or any other substance in which there are vegetable or organic remains. These materials should be so spread as to gently incline to the centre, and to have the sides slightly higher, so as to give the yard the form of a shallow dish, which form will prevent the loss of the liquid evacuations of the stock. To prevent loss from the escape of any ammonia which may be formed, it would be well to incorporate plaster, or pulverised charcoal with the rough materials as they are being spread on the surface of the yard. When the yard is filled with such materials and levelled, the entire surface should have plaster or pulverized charcoal strewn over it, which operation should be repeated twice or thrice a week.

If the winter should prove mild, a few inches more of rough materials should be added, care being taken to preserve the dish-like form of the yard.

If our advice be taken in the letter and the spirit, we hazard nothing in saying that the whole mass thus accumulated will, by spring, be just as good as if no raw material had been placed in the yard, while its quantity will be greatly increased.

CATTLE SHEDS.

Every cattle yard should be partially surrounded by comfortable sheds to protect the cattle from the weather—the sheds should either have a Southern or South-Eastern exposure. Their floors, whether of earth or plank should be elevated a few inches above the level of the yard, to endure dryness, and afford comfortable lodgings for the Stock. Which floors should be well littered, and frequently cleaned out.

COMPOST HEAPS.

Besides covering the surface of the cattle yards as advised above, every Agriculturist should form compost heaps of the materials alluded to in the preceding paragraph, in the following manner.

To every 2 loads of rough materials add 1 load of stable manure, 1 bushel of ashes and ½ a gallon of plaster, layer and layer about. The form of the compost heap should be conical, the sides and top compressed with a shovel or spade. In the spring previous to hauling out your composts, shovel the heaps over, so as to mix the various substances together and thereby produce an equality of strength. While thus shoveling over your compost manure, you may greatly improve its quality by adding 1 bushel of plaster and 2 bushels of salt to every 20 two-horse cart loads of the compost. When thus shoveled over let it remain 10 or 12 days in bulk without compression, to let in atmosphere and superinduce decomposition, which, when once commenced, will proceed onward after having been ploughed in, and thus secure a supply of food to the crop to which it may be applied, as fast as the roots of the plants may be able to take it up and assimilate it.

PUMPKINS AND ROOTS.

These should be gathered and put away before the frost has time to injure them.

ORCHARDS.

Many Orchards, which, through long neglect have become poor bearers, may be restored by care and proper manuring. If you wish to try an experiment to renovate yours, form a compost for each acre of trees, in the proportion of 10 two-horse cart-loads of *wood's-mould*, 5 two-horse loads of *stable manure*, 4 bushels of *bone dust*, 5 bushels of *ashes*, 2 bushels of *salt* and 1 bushel of *plaster*; shovel the whole well together, throw it into bulk and let it remain two weeks, then spread it evenly and plough it in two inches deep, taking care to not injure the roots of your trees, then harrow and roll.

If there be any *dead limbs* on your trees, have them carefully sawed off into the sound wood early this month, then have the surface of the wounds smoothed with a drawing knife, and give the surface of the wounds each two coats with a composition comprised of *Gum Shellac* dissolved in Alcohol. Let the first coat dry before the second one is applied. Dust the second coat when put on with fine sand.

We do not advocate much pruning at any time; but we do think that all dead limbs should be severed from the tree at any time, and if done, as we advise, early this month, will we are sure be

productive of good, and that no possible harm can arise from their amputation.

COATING FOR THE TREES.

It sometimes happens that trees are injured through neglect, in suffering their trunks and limbs to be covered with moss, &c. If your trees be in this condition have the moss carefully scraped off, and dress each tree, trunk and such limbs as may have been thus effected with a mixture made in the following proportions, viz.: to every gallon of *Soft-soap* add 1 lb. of *Flour of Sulphur* and 1 qt of *Salt*, stir the whole well together and paint the trunk and infested limbs with a coat of this mixture. It can be put on with a common white-wash brush.

Now, if you do not wish to encounter the trouble and expense of treating your whole orchard as above advised, *make the experiment on an acre*, and next year you will regret that you had not treated the whole in the same way, such will be the difference in the appearance and product of the acre treated in the way suggested, as to convince you, even against your will, and true economy will dictate that you mistook your interest in not following our advice.

DRAINING OF WET LANDS.

If you have any *wet lands*, have them thoroughly drained. The effects of draining will be to increase the temperature of the soil and make it two weeks earlier in maturing its crops; it will make the soil more friable and easier to work and enable you to plough fully two weeks earlier in spring, besides enabling you to plough it deeper and with less force of team; it will improve the health of your place, besides yielding more kindly to manure; your crops will be more in quantity and better in quality.

MILCH COWS AND OTHER STOCK.

See that your Milch Cows are well attended to, and never suffer for food or water.

WORKING ANIMALS.

Let the food of these be generous, house them of nights, keep them well and cleanly bedded, and see that they receive water thrice a day.

BUCKWHEAT.

Harvest and secure your Buckwheat before frost comes to cut it down. Take care of the straw, as your stock will need every pound of it the ensuing winter and spring.

CORN COBS.

Don't sell your corn on the cob, have your corn shelled, store the cobs in your barn, and have them crushed and steamed. In this way they make excellent food for cattle, when thus prepared, and with the addition of meal or bran make good slop for Milch Cows.

FALL PLOUGHING.

Have any stiff clay land that you intend for spring crops ploughed as early this fall as may be convenient; plough deep and have the furrow slices turned at an angle of about forty-five degrees. Such land should not be ploughed when either wet or dry; but when moderately moist. If you think it needs liming, after you have ploughed it, give it a dressing of 20, 25, 30 or 50 bushels of lime per acre, or an equivalent quantity of marl.

Next spring, before harrowing, roll your field, so as to close up the seams, then harrow.

SHADE TREES.

If your home is without shade trees, supply the deficiency this fall, soon after the leaves fall—and intersperse through your lawn, flowering and other shrubs.

SETTING OUT NEW ORCHARDS.

If you design setting out a new apple orchard this fall, it is full time you were providing yourself with manure and preparing the ground for the trees.

Of the Manure.—Prepare a compost, in the proportion for each acre, as follows: mix together layer and layer about,

10 two-horse loads of marsh-mud, river-mud, or wood's mould,
10 two-horse loads of barn yard or stable manure,
5 bushels of bone-dust,
10 bushels of ashes,
2 bushels of salt, and
1 bushel of plaster.

Throw the whole into bulk, and let it remain in that state for one month, when it will be ready to be applied to the land.

Preparation of the Ground.—The land should be deeply ploughed and subsoiled, then harrowed and rolled; this having been done, apply your manure and cross plough it in, then harrow and roll, when the land will be fit to receive the trees.

Selection of Trees.—Choose the best, and those best suited to your locality and latitude; buy from a responsible nursery man, and above all things, avoid tree-pedlars, as, nine times out of ten, if you deal with these itinerant sharks you may calculate on being cheated.

WORK IN THE GARDEN.

OCTOBER.

Let us take a brief walk in the garden, as that will suffice.

SPINACH.

The advancing Spinach plants should be weeded and thinned out so as to stand four or five inches asunder.

LETTUCE PLANTS.

If your Lettuce plants are large enough, prepare a warm border, facing the south, and set them out.

SETTING OUT CABBAGE PLANTS.

About the 10th of this month, select a dry loamy bed, with a southern or south-eastern exposure, spread thereon about 3 inches in depth of stable or barn-yard manure, over that sow ashes with a free hand; then dig the bed up a spade deep, rake well as the spading progresses, so that the soil may be thoroughly pulverized. Your bed being manured, dug, and raked, stretch your garden line across it, from east to west, three feet from the edge of the bed, then take a hoe and form a ridge with the edge of it, 4 inches in depth, pat the sides of the ridge with the back of the hoe to keep it from crumbling down, then form another ridge three feet from the first, and so continue until you have ridged out your bed. The ridges being completed, set out your cabbage plants 6 inches apart on the north side, about midway of the ridges; then dust your bed over with a mixture of equal parts of ashes and plaster. The close planting is necessary to allow of loss from the frost of winter.

Towards the latter part of next month, strew stable manure along the bottom of the ridges along the line of the plants. Next spring as soon as it is time to work the plants, draw the earth from the tops of the ridges down upon the bottom, so as to cover the manure. This will be the first working of the plants. At the same time lighten up the earth between the ridges with the hoe.

When the proper time arrives, thin the plants out to stand 2 feet apart in the rows, and work be-

tween the rows as before, extirpating all weeds, and give the plants a slight hilling.

If you manage judiciously, you may lessen the labor of thinning out, by occasionally drawing the superabundant plants for coleworts.

Repeat the working of your bed two or three times, or oftener if necessary, of that you must be the judge, the object in cabbage culture being to keep the earth light, the bed and plants clear of weeds, and to give the plants an additional hilling each time they are worked.

Should the spring and early summer prove dry, have the plants freely watered every second day, until rain occurs. The drier the season, the more working will the cabbages require, as the opener you keep the soil, the better condition will it be in to absorb and receive benefit from the dews.

At each working give your bed a dusting of ashes and plaster.

Two or three waterings of soap-suds will tend to push the cabbages forward and promote their growth.

ENDIVES.

Tie up your Endives, and draw the earth up around them.

CAULIFLOWERS AND BROCCOLI.

Those Cauliflowers and Broccoli that are to head this month must be worked. The plants in the frames will require being covered with the glasses at night.

MINT.

Mint plants intended for winter use, should be set out in frames early this month.

ASPARAGUS BEDS.

As soon as the Asparagus tops turn yellow, cut them down even with the ground; rake off the asparagus tops, weeds and grass, put the whole in pile, and when dry enough, burn them. That done strew about 2 inches in depth of rotten dung between the rows and fork it in and rake the bed. In *early spring*, give the bed another dressing of rotten dung, fork it in, rake it in, and then strew over the bed a free dusting of equal parts of salt and ashes.

CELERY.

Earth up your Celery for blanching.

RHUBARB AND SEA-KALE.

Sow the seeds of these early this month.

SHALLOTS, GARLEC, CHIVES.

Set these out early this month.

ONIONS FOR SEED.

Set these out early this month.

RASPBERRIES.

New plantations may be made about the middle of this month.

GOOSEBERRIES—CURRANTS.

Towards the last of this month, plant out Gooseberry and Currant bushes.

STRAWBERRY BEDS.

Clear off Strawberry beds, and give them a slight dressing, composed of 7 parts rotten dung and 1 part ashes, previously well mixed together.

☞ The Virginia and North Carolina Agricultural Society have determined to purchase an "experimental farm," for the testing of improvements in agriculture, and the practical teaching of that science of sciences. Such an establishment, if properly conducted, must become of immense value to the country and especially to the Southwest, whose agricultural resources, great as they are already, are only just beginning to be developed.

TO THE PEOPLE OF THE UNITED STATES OF AMERICA.

FELLOW CITIZENS:—An application having been made to your Representatives to vote a sum equal to five cents from each individual in the United States, or about a million of dollars of your resources, to the promotion of an improved system of "Terra Culture," as described in Senate Document No. 23 of third session of 25th Congress, I hereby direct your attention to a few extracts, taken from the applicant's preamble, copies of which were forwarded to each member of the 26th Congress, in session November 30th, 1839, by Russel Comstock.

[*From the Poughkeepsie Eagle, N. Y., Jan. 25th, 1840.*]

PRESERVATION OF FRUIT TREES, PLANTS, &c., &c.

GREAT DISCOVERY.

"To the Hon. Perry Smith, Chairman of the United States Senate Committee on Agriculture, of the 25th Congress, with consent and by the advice, on the 23d inst., of the Chairman of the United States Senate Committee on Agriculture of the 25th Congress, I forwarded to each member of 26th Congress the accompanying document, dated 14th inst. The object is to show you some of the proof that a discovery of vital importance to civilized man has been made, which in several letters from different members of the present and last Congress is valued at hundreds of millions of days' labor, and worth more than all the discoveries of the present age combined, the application of steam not excepted.

For what purpose would all the public landholders more freely or gratefully consent to give one hundredth part of those lands or the proceeds thereof. Would they not be grateful to those members of Congress who assist in giving the owners of the public domain the desired information, and reverence them as benefactors of human kind? For the honor of the Republic, for the honor of the age, and for the interest and comfort of the living, as well as the unborn, let not that discovery, which may cause two seeds to ripen where one now does; which prevents the premature death of all cultivated trees; which has been searched for in vain during the history of all civilized society—die with the discoverer for want of the action of the United States' Congress.

Our patriotic discoverer claims the following five discoveries as his, besides other discoveries which are stated in his memorial to the 25th Congress:

1st. That various diseases, universally supposed to be destructive to plants, are only symptoms that a particular error in cultivation has been committed, and that many other injurious effects have been produced by the same error, which are attributed to other causes.

2d. That the error is universally committed to a greater or less extent throughout the States, and that he has seen an excess of it wherever he has been, which is in the Atlantic States from Georgia to Massachusetts inclusive.

3d. That the Peach and Nectarine are more easily injured by the error than most other fruit trees, and the cause of their being more easily injured by it, and that this error causes them to be barren or short-lived.

4th. Application of two known laws in nature demonstrate the reality of his discovery, and its application to the whole vegetable kingdom, and that by them his discovery, if publicly known, must be perpetuated, and his practice more easily introduced, and that by these two laws the occasional

success of common remedies is explained.

5th. That the said error is the obstacle which has discouraged experimenters and lamentably retarded improvements in the science and practice of agriculture, and that he has discovered facts and made himself acquainted with knowledge sufficient to reduce them to practice.

We are further informed that it is neither climate nor soil, nor insects nor worms, that are the cause of many of the disastrous effects that have been attributed to them, but that those effects are produced by error in cultivation, which diseases the smallest plant or largest tree."

"Our modest and patriotic fellow-citizen admits in the course of his preamble that the practical part of his discovery is so extremely simple and economical that it costs no more to prevent the diseases than it does to produce them, and that it is so different from the established theories and habits of the people, that unless a large amount be appropriated, many will be unwilling to try it, and therefore the public good seems to require that a large amount should be appropriated. He moreover asserts that there are two known laws in nature by which the reality of his discovery and its application to the whole vegetable kingdom are demonstrable in less than thirty words.

That this invaluable secret, whatever it may be, is not strictly a new discovery, is demonstrable by numerous living witnesses which have inhabited fields of the Old World for over a thousand years; and our discoverer freely admits, and in very emphatic language, that there are thousands of trees in our own country, on which, what he terms the common error, has never been committed, and also that several of the fifteen gentlemen to whom he communicated his secret confidently for ever, have seen such trees on their domains.

Hear him: 'the Senator from Missouri, Mr. Linn said, that the most flourishing and healthy peach tree in his possession had never had what I call the common error in cultivation, committed upon it.

The Senator from Pennsylvania, Mr. McKean, said that he had long supposed that what I call the common error, was an error, but that he had no idea of such extensive evils arrising from it.

The Senator from Maryland, Mr. Spence, said that in his district it was a universal custom to commit what I call the common error in cultivation on the fruit trees, and that it was common to have no plums, pears, &c. free form worms, excepting on a few of his own, on which the error had not been committed for twenty years if ever, and those few (four) continued to bear abundantly annually; that he had no recollection of seeing an imperfect wormy plum on either of these four trees, but that he had never supposed that to have been the cause of their perfection.

The Senator from South Carolina, Mr. Calhoun, said, while examining the defective trees around the Capitol, that the principle, when exhibited, was very simple; that it was philosophical, and in his opinion, it could not be neglected without injury to the health and growth of trees and plants, and was worthy of public patronage.

The Vice President of the United States, Mr. Johnson, said that my discovery was perfectly consistent with the laws of nature, and when observing a few trees near the Capitol, which had been injured by the error, and were recovering, further remarked that my theory was essentially correct, and obvious to the most superficial observer.

The member from New York, Mr. Jackson, said that he had reared an orchard on which he had carefully avoided an excess of what I call the common error, and that it had been admired as the most flourishing and fruitful orchard in the neighborhood, and that he had recently seen a field of Indian corn which yielded more than one hundred bushels of shelled grain to the acre, in which an excess of the error had been avoided, while the success was attributed to quite a different cause.'

From the preceding extracts it is evident that this inestimable treasure lays near the surface, and from the disclosure having been communicated to rational and intelligent minds, it is preposterous to expect that these gentlemen can, in the pursuit of their rural avocations act directly contrary to knowledge and sound judgment; they must therefore necessarily and unavoidably communicate the secret, by their example, which will eventually disseminate in proportion as mankind take an interest in the merits of the alleged discovery."

The above is taken from Thomas Bridgeman's Gardener's Assistant. Here is my voluntary disclosures, and from twenty years' close practical experience. Russell Comstock said, that his secret was known in England a thousand years ago; that may be as it will—20 years ago many had the practice of planting too deep in England, and said that it was natural for the roots to come to the surface, it prevented the wind from blowing them down.

Mr. Pottney published a Planter's Guide in 1813, recommending very forcibly the advantage of planting on or near the surface. In 1832 I planted a great deal, many of which were too deep. In 1833 I was favored with a perusal of Pottney's Planter's Guide. I then saw that I had committed the common error—those that were in a dying condition I took up and planted near the surface, and of course they growed vigorously; and I have practiced planting near the surface ever since.

In 1852 I planted a number of trees for a gentleman who had Russell Comstock's secret; he gave no directions, but had he not coincided with planting near the surface, he would have ordered it otherwise, I doubt not.

I will, I hope, explain my mode of planting so plain that every one can plant their own orchards, and that they may not have the slightest risk of losing a single tree.

Dig your holes for good sized nursery trees, which trees will be from six to eight feet high, then the holes will be about four feet wide and eighteen inches deep—the first spade or all the good soil, that is on the top, lay to one side; all the rest, which is what we call sub-soil, as you dig it spread it over the surface, all round where you are at work, then you have to cart soil to fill up the holes—that you can do from the side of the fences, or the side of woods—cart this rich soil up into piles where you are to plant your trees,—then get some lime and mix with the soil, at the rate of one bushel of lime to twenty bushels of soil, well mixed twice before using it.

Now we are ready for planting—the depth of the hole is eighteen inches, and about four feet wide; a suitable sized stick is drove firm in, about the centre of the hole, and fill in a little; then take the tree and see that the roots will come within one inch of the surface. Now, peradventure, this is Mr. Comstock's secret, which you were to get in thirty words.

The tree is planted within an inch of the surface, which admits of light, air and moisture to the roots, and the large holes give the tender roots an opportunity to press their way through this fine rich soil, and by the time they get out of it they can work their way through any soil. I have known many trees to be killed by applying manure to the roots; I hope whosoever favours me with a perusal of this article, will apply no barn-yard manure, nor no kind of manure within three inches of the roots.—I plant apples and pears thirty feet apart—peaches fifteen feet apart. Ornamental Forest Trees esteemed for their foliage, commonly planted in streets or by the side of roads, and if leading to a gentleman's house, will be four feet from the edge of the road, and twenty feet apart. Last Fall at this place, I planted about a thousand trees, and I had almost said all of which, notwithstanding the severe drought, not only lived, but made average growth. This I hope, will show all who may wish to examine for themselves, that this inestimable treasure lays near the surface.

Respectfully, &c.

JOHN PRIEST.

Catonsville, Baltimore Co., Md., Sept. 12, 1854.

WIRE GRASS.

ACCOMAC C. H., Va., Sept. 11, 1854.

To the Editor of the American Farmer.

SIR:—In the Farmer for September, there are two communications, with parts of which I am so forcibly struck, as coinciding with my own experience and observation, that I am induced to add my testimony with that of the writers.

The first is that of J. C. W., Onancock, Accomac Co., Va., on the subject of Wire Grass. He says that in the summer of 1853, "I wished to put a crop of Turnips in a piece of ground set in wire grass. I ploughed and harrowed the ground several times, then raked it thoroughly with hand rakes, to destroy the grass previous to manuring. I hauled the grass away at the rate of 25 or 30 cart loads to the acre, then worked my turnips the whole season with the hoe, but the pest was still there. The smallest joint seemed to take root and grow with renewed vigor. The same piece of ground I have now in sweet potatoes, with more wire grass than any other part of my patch."

Now, sir, permit me to add the testimony of my own experience to that of J. C. W., in whom I think I recognize one of our young and enterprising farmers. In the spring of 1853, I selected a portion of my very best land, rankly set in wire grass; ploughed, harrowed, horse-raked, and hand-raked it with great care, in the hope of having some extra corn. The corn was planted and cultivated with great care, and yet, notwithstanding the quality of the land, the fine tilth, (for when planted it was almost as fine as a garden-seed bed) and the care and labor bestowed on it, this corn was much inferior to that on any other part of my field. Thus notwithstanding my high expectations, I met with disappointment. Yet I trust my experiment was not wholly unprofitable—it taught me a wholesome truth, which I think I shall always recollect—viz: *never to remove wire grass from land.* It is the opinion of many of our own farmers, of which opinion I am a decided advocate, that wire grass, though it increases the difficulty of cultivation, exerts a conservative influence on the soil, and maintains its fertility to a much greater extent than is maintained by land destitute of this necessary evil—if evil indeed it be.

Though I removed from some ten acres at least 150 cart loads of wire grass, it is now as thickly set as ever. Indeed, the thorough pulverization of the soil, and cutting up of the grass into short pieces, were favorable to the increase of the crop the next season, for it throws out roots at every joint, and the fine tilth was favorable to its growth.

It would have required a good dressing of manure (previous to the growth of the present crop of wire grass) to have restored the land to its previous fertility. The wire grass is peculiarly rich in Potash—an essential ingredient of fertile soils, and of course the extirpation of the grass was equivalent to the abstraction of a large quantity of that substance, so all-important, and of which our soils, as well as all other long cultivated and severely cropped soils, are very deficient.

In this connection, I will mention an experiment by which I succeeded—effectually I hope—in subduing another pest of small grain, viz: the *partridge pea*, as we call it. On part of my land this was very bad; so much so, as entirely to preclude the cultivation of wheat for several years previous to my taking possession of the farm on which I reside.

The usual method had been, when the infested land was in oats, to cut them when in the milk, while the peas were in the same state, and feed all together to stock. With the next crop, however, they would spring up as thickly as ever. Last year as usual, I cut and fed the oats and peas, and as soon as practicable ploughed deeply and prepared finely, and sowed the infested spots in Ruta Bags, in drills. This year, from necessity, I sowed the same land in oats, but not a sign of the pea was visible. Whether or not this subjugation of the old enemy is permanent, time must determine. It may be that it is "cast down, but not destroyed," but certain it is, it was very quiet this year.

I find my communication has run to so great a length, that I must defer my remarks on the second letter, viz: "Rappahannock's," to a future occasion.

If the above is worthy the room it will take in the columns of the Farmer, it is at your service.

Very respectfully, yours, &c. "AGRICOLA."

CURING BACON.

To the Editor of the American Farmer:

Dear Sir:—As good Bacon is an article of great interest in every family, I furnish you with my method of curing it, as it may prove alike beneficial to some of your subscribers as it has done to myself and family.

Whenever I think the weather cold enough to prevent my pork from spoiling before the salt can penetrate the flesh, preparation is made for killing my hogs. As soon as they are scalded, scraped and entrails taken out, they are washed out and allowed to dry till my hands have taken their breakfast; then the process of cutting up and salting commences, even while the flesh is quite warm, as experience has taught me that warm flesh will imbibe salt much more readily than cold. Place tiers of shelves two and a half feet apart on three sides of your smoke-house, making their bottoms of strips three inches wide instead of wide plank, so that air may be admitted to the bottom as well as the sides and top of the pork. In packing down, place a row of middlings first on the shelf, next one of shoulders, and lastly, the hams on the top. This is as much as I ever put on one tier of shelves. Proceed in like manner till the whole is packed. Use fine

packs of salt to the 1000 lbs. if the hogs are large, but if small, one bushel to the thousand will answer, mix equal parts of powdered saltpetre and red pepper, and apply a table spoonful to each of the joints before the salt is put on; but if the pork is small, half that quantity will be sufficient. If the weather is moderate, six weeks will be long enough for it to remain in salt; if very cold, let it stand two weeks longer.

When the time arrives for hanging up, sift some clean Hickory ashes, and after having put the strings into the joints, brush or wipe off the salt, (never wash,) and apply a coating of fresh ashes to the flesh side of each piece, and hang up carefully; the middlings need no ashes—let it hang three or four days, and dry before you begin to smoke. After that, make one smoke a day only for ten or twelve days. In the month of March take down your joints and put them into bags made of thin cotton cloth, carefully tying each bag around the string by which the pieces of meat were hung up. Hang up again and let it remain till wanted for use.

If a Montgomery Farmer will nail a sheet of tin on each corner of his smokehouse, (outside) near the eaves, he will more cheaply keep out rats, than by any method that I have tried. When he wishes to smoke, let him cover the centre of the floor about two inches deep with dry earth, place an iron pot or oven on it, and smoke in that way, as I have done for several years, without incurring any injury from fire.

A VIRGINIA CLODHOPPER.

Sept. 10th, 1854.

THE OREGON PEA.

To the Editor of the American Farmer.

SIR:—The June number of the American Farmer contains a most marvellous account of the Oregon Pea, as a fertilizer of land and as an article of food for man and beast—whilst it is not my purpose to impugn the veracity of any one, I feel it my duty to warn the Farmers of Eastern Virginia, whose soil and climate may not suit the plant as well as Tennessee, to beware of investing 40 cts. per bushel in the article, which I am informed in that communication sells for $80. In 1849 a gentleman furnished me with a small number of the Peas, with a high character of their excellence as a fertilizer of land. On the 30th of April of that year, I planted them in land of good quality and well prepared.—The plant in that number is well described, except as to its luxuriant growth, and immense product; with me it was minus more than five hundred per cent.; although planted at that early period, very few matured before frost; they were carefully gathered, and the ensuing year sown broad cast on thin land by the side of black-eyed peas, which with us furnish a very slight covering for land, notwithstanding they were of much more luxuriant growth than the Oregon. I furnished several of my neighbors with the peas to experiment with; the result of their experiments was no better than mine; as an article of food, I should never have thought of them, until all those with which I am acquainted had been exhausted. R.

Essex County, Va., June 26th, 1854.

[We give the above from a respected friend and correspondent of Essex Co., Va. His experiments are certainly very different from those made in the South West with the Oregon Pea, and vouched for by many respectable persons over their own signatures.—ED. AMERICAN FARMER.]

GUANO ON COTTON.

We forwarded to the writer of the following, some time since, a lot of Guano, who on sending for a further supply, writes as follows:

Covington, Ga., Sept. 15th, 1854.

To the Editor of the American Farmer.

SIR.—The Guano you purchased and forwarded to me last Spring, I put on Cotton land, one hundred and twenty-five lbs. per acre. The land was broken up in March with a coulter plow quite deep, the first week in April with a suitable plow, (a shovel) I laid open a deep wide furrow and deposited the Guano, and then with a small Dagon plow I made a ridge on the Guano, covering it quite deep, then following with a small Bull tongue plow and split the ridge and deposited the seed and covered them. The land was quite thin in its virgin state, and had been greatly exhausted by tillage. The season has been very unfavorable for the cotton crop, yet I think I shall make from five to six hundred lbs. per acre. Just before the drought set in a good judge thought I would make from 700 to 800 lbs. per acre. Some rows through my fields did not receive any Guano from mistake or carelessness of the hands sowing; those rows appear to have about one third of the fruit that the rows have that received the Guano. One of the great benefits derived from manuring Cotton land with Guano is, it quickens the growth of the weed, and causes the fruit to mature much earlier than it would, which is a great desideratum in a climate where the warm season is too short for the growth of Cotton. I am very respectfully,

Your humble ob't serv't,

WM. D. CONTERS.

THE CURCULIO.

Mr. EDITOR:—Some time since I saw in the Maine Farmer a remedy for the Curculio, which I tested at the time with unexpected success. It consisted of three bands of cotton fastened around the tree at intervals of about one foot. It did not prove to be a perfect security against that pest of all plum trees, but enabled me to save the greater part of my plums, and encouraged me to do a little something to renovate my trees, which, since the appearance of the curculio had been growing in sward land. Accordingly I dug up the ground around them and removed the turf from all save one to the hog pen. From that tree I gathered about one peck of plums infected with the bug, also a bushel of sound fruit (it being a small tree) while from the others the fruit was all sound. I allowed the cotton to remain on the trees the year round, taking no trouble to renew or repair it after it was put on. I am now nearly rid of the "critters," indeed, I have not been able to find one upon my trees this season. And when examining the cotton have found but three eggs.

The trees look finely and a ready bending under their burden of fruit. If, in any case, cotton has failed to protect anybody's plums, I am persuaded it is because they have been too stingy of it.

The best way is to buy batting and split it in two several times, then cut into strips three or four inches wide and wind around the trunk of the tree, twice at least, and tie with a piece of twine on the upper edge. Three bands at least should always be used, and more would be better, unless the land is in grass, in which case the sods can be removed together with the larvæ, which spend the winter in the earth directly under the tree. H. D.

STATE OF THE CROPS.

To the Editor of the American Farmer.

Sir:—In an issue of the Philadelphia Ledger, a few days since, the farmers are charged with trying to create a panic, on account of a scarcity of breadstuffs. The Ledger says that they always look for reports of short crops from the farmers, about this time of the year, as regularly as they do for a good crop of peaches, and after much speculation about the amount of the crops of breadstuffs grown, the public are assured that there is no danger of famine, or even any considerable cause of advance of price—but the Ledger admits one thing, and that is, that the crops of wheat and corn are at least one-fifth short of an average, and this he puts down as an exact state of the crops. Now my opinion is, that it is not the farmers who are trying to create a panic—but I do say that from the tenor of the reports in the Ledger, and many other prints, that the Editors and the speculators in grain who pay them for it, are trying to frighten the farmers, by telling them that there are good crops in Europe, so that we will sell to said speculators, who will, when they get all in their own hands, raise the price, just as they did in 1847.

Now I do not think there is any danger of famine, but there is some prospect for high prices, and I will give my reason for such belief. If the withdrawal of 48,000,000 bushels of breadstuffs from consumption in 1847, by short crops in Europe to that amount, raised the price of corn from 40 cts. to $1,25 cts. per bushel, and that of wheat from less than $1 to $2,25 cts., will not the admitted deficit of crops at home here, of 200,000,000 bushels, have the same effect on the prices, particularly when it is known that we will have an immigration of 700,000, equal to the population of seven such states as Delaware, to feed. We farmers are no whiners, as the Ledger editor indicated in his article, and I merely state the fact. J. JONES.

THE LATE HARVEST.

To the Editor of the American Farmer:

Sir:—The public prints teem with accounts of the crops; some of their being light, almost indicating that a famine is at hand, and others that the crops are very abundant in Europe and California, &c., and all this appears to be guess work, or for pastime.

I have passed my wheat crop through the half bushel, and thanks to the ingenious Mechanics of our country, and of Pitt, particularly in this case, we are enabled as we thrash to tell exactly what our wheat is turning out, and, from many countings during the time I was getting out my crop of over 2000 bushels, it required an average of 32 sheaves to make a bushel of wheat, when 18 to 20 sheaves of similar size, would make a bushel in former years. This shows a falling off of full one-third of the usual crop, and corresponds with my expectations at harvest. I had a good show of straw, more than equal to former years when I got 30 bushels and over per acre, but now average about 20 bushels. Where the growth of wheat was most promising, early in June it fell down and yielded little else than bad straw, but where it was lighter, and did fair to yield about 20 bushels or less, it filled pretty well, and was a fair average for such land. Such was the general rule of our County with Mediterranean wheat. Some fancy wheats were an utter failure, among them I will particularly name the Velvet Wheat. J. JONES.

FLAX AND FLAX FIBRE.

BY JOHN A. WARDEN, M. D.

With regard to the natural culture of this plant it may be stated: Its native country appears to be a matter of question among botanists, as it is found growing wild in most countries where the physical conditions are suited to its cultivation. The general opinion however, inclines towards ascribing it to the East. Be that as it may, this disposition to suit itself to such a vast range of soils and climates is of infinite importance to man, as it enables him to avail himself of the advantages resulting from its cultivation to a far greater extent than he otherwise would be able to do.

The members of this natural order of plants generally are remarkable for the tenacity of their fibres, the elegance of their shape, the beauty of their flowers, which are blue, red, or white, and the emollient and demulcent properties of their seeds, all are harmless.

Although flax enters largely into the cultivation of some of the West and S. West States, the seed is the only marketable return which the farmer gets, the straw being entirely neglected. Probably some 200,000 or 300,000 acres have been cultivated this year, producing, according to the best estimates I could obtain, between 8 and 10 bushels of seed per acre; which, judging from the relative yield in Europe, would give about one ton of straw to the acre, or a gross amount of from 200,000 to 300,000 tons.

These amounts, though large, are nothing compared with the immense productive capabilities of those fertile districts. The same obstacles, however, appear to limit them here, as have so prejudicially retarded the extension of flax cultivation in Great Britain. These are "the general opinion that flax is an exhausting crop," and, "the difficulty of finding a market for it when produced." As regards the first, thanks to the important advance which Agricultural Chemistry has been making, the question has been entirely set at rest by the true explanations which science places in our hands for them.

Is flax an exhausting crop? Some experiments were made a short time since by Dr. Hodges, for the purpose of ascertaining the relative proportion of the produce of flax, and also the distribution of the inorganic matter in them. The flax employed had been steeped in the ordinary way, and was found to contain 1.73 of ash. Of this air dried straw 4000 lb weight were taken, which produced

Of dressed fibre,	500 lb.
Of fine tow	139 lb.
Of coarse tow,	193 lb.
Of fibre in all,	842 lb.

The products contained,

In the dressed flax	4.48. lb of ash.
In fine tow,	2.08 do.
In coarse tow,	2.56 do.

Or, in the whole of the fibre 9.12 lb of inorganic matter; so that 59.08 lb. which the crop had withdrawn from the soil remained in the useless portions, while only 9.12 lb. were carried off in the dressed fibre. If we compare those results with those obtained from an analysis of an acre of wheat, for instance, we shall see, that while the flax took away 9.12 lb of inorganic matter, the wheat crop, grain and straw together, abstract about 38 lb from the soil.

Flax, fortunately, has a very wide range of soils; sands, sandy loams, light and heavy clays, gravels; chalk, marls, alluvial soils, peat and reclaimed marsh lands, are all seen, under ordinary circumstances, to produce a crop. The sandy loams and the alluvial soils, natural as well as artificial, (warp lands) however, appear to be the best suited to its cultivation. In Ireland large crops are obtained on peat bogs, lands with a clay substratum. The plant needs an open soil, through which the water may freely percolate, as its roots are of a fibrous nature, and extend laterally and vertically, to a considerable distance, (2 or 3 feet.) All the conditions required for its successful cultivation are, that the soil be deep, in good heart, and in good filth, well drained, and free from weeds; if these exist, we may under ordinary circumstances, expect a good crop. Owing to the rapid growth of the plant, and the consequent shortness of the time it occupies the land, it offers many opportunities to the grower, and admits of more changes in the rotation than most of the other farm crops.

The mode of cultivation is too well known to need more than a passing observation. The condition and tilth of the soil must be secured, about two bushels of cleaned seed to the acre should be sown broadcast by the hand, or by the broadcast barrow; it should then be covered in by a pair of fine harrows, and a light roller run over it completes the operation. The month of April is the usual time for getting in the seed, but I am much inclined to think that flax might be grown advantageously in many late districts being sown in the autumn. After being properly got in, the only care it requires, is weeding.

Many different modes of stacking and separating the seeds exist; probably the cheapest and most efficient is to pass the straw through plain rollers, which crush the capsule and let the straw pass through uninjured. The seed is separated from the capsule or "boll" by winnowing, and the straw remains to be stacked in the usual way. Under favorable circumstances, we may expect an average crop to produce from 30 to 40 cwt. of straw; and 15 bushels of seed to the acre.

We ask the attention of farmers to the following judicious suggestions as to to the management of the flax crop. By the distribution of such useful information among the Irish farmers, the Flax Society of Ireland made the immense advances in flax culture, to which we have already referred.

On the subject of preparing the soil for flax, Mr. Deman, a Belgian gentleman, who was employed by the Royal Flax Society of Ireland as a teacher of the proper methods of managing the crop, holds the following language:

Preparation of the Soil.—It is of great importance in the culture of flax, that the land be well drained, and repeatedly and carefully cleansed from weeds and thus rendered of the finest, deepest, and cleanest nature, in order to facilitate the penetration of the roots, which often go to a depth equal to the length of the plant above ground.

A light plowing immediately after harvest is required for all sorts of soils, but heavy, stiff soils require to be laid in ridges before winter, and to remain till a fortnight before sowing, when it requires a very deep plowing. But light soils must have their last plowing in October, or before winter sets in. If the land is not sufficiently rich, liquid manure, or rape-cake powder should be spread over the land before sowing the seed. The land should be harrowed and rolled, so that it may have the appearance of a garden.

But as the expense of preparing grass land directly for flax, may frequently be too great, it is desirable that some other crop should intervene, of such plants as do not occupy the land long, and which are benefitted by frequent stirring of the earth as they grow, such as peas, beans, turnips, &c., because repeated stirrings are required to render the moulds sufficiently fine and loose, and to help to kill the weeds, which would otherwise do great damage to the flax. It is stated that the Livonians, when they clear wood lands, burn the wood upon them, and in this state, prefer them to any other kind of soil for flax crops.

If the land be stiff, it should be exposed to the winter frosts to moulder it, and loosen its parts.

In pulling the flax, it should always be done with the intention of stripping the seed; for this purpose it is desirable to lay it in handfuls partly across each other, as the process of stripping, technically called "rippling" is facilitated, for the ripplers thus find the portions ready separated to their hand. It is important, even in this first operation, to separate and assort the flax according to the qualities which various parts of the land may have produced, as it is probable that each quality may require a peculiar treatment. Much loss is frequently caused, both to the grower and consumer, by neglecting this simple precaution.

The rippling is performed by having the ripple placed on the middle of a large cloth, spread on a convenient piece of ground. The ripple is a sort of cone, consisting of one or two rows of long, triangular teeth, placed upright, by which the pods containing the seed are removed from the flax.—The manner of using the instrument is to have it firmly fixed on the middle of a plank of wood, at each end of which a rippler sits, when, by pulling the seed ends of the flax repeatedly through the combs, the operation is executed in a complete and expeditious manner. The seeds afterwards require drying, when they will separate from the pods of their own accord. In large establishments, where other occupations may render it inconvenient to perform the above operation at the harvest time, the flax may be dried without rippling, and stacked until the following spring. By this mode of treatment, the seed capsules become dry and crisp, and thus the seed can be separated from them by crushing between a pair of iron rollers, so arranged that the seed ends of the handfuls of flax can be passed across the nip of the rollers, with its length in the direction of their axles; thus avoiding the danger of tearing the fibres, as in the hand rippling, and the necessity of subsequently threshing the seeds from the capsules. The flax thus dried, may require a little longer steeping afterwards.

The Crops and Prices.—A farmer of Richmond, Va., writes us as follows:

"I am surprised that any one should doubt that wheat will again rally; but may be the wish with me is the "father to the thought," as I have sold only 465 bushs. of my crop at $1,75 with about 20 to 2500 on hand; the wheat crop in large portions of this state is *stretched*, not a half crop; I have heard of instances in this city of commission merchants selling crops at 500 bushels (estimated,) which turned out only 150; *half a crop* is reported in Ohio, and perhaps in Pennsylvania, and the northwest."

AMERICAN FARMER.

BALTIMORE, OCTOBER 1, 1854.

TERMS OF THE AMERICAN FARMER.

$1 per annum, in advance; 6 copies for $5; 12 copies for $10; 30 copies for $20.

ADVERTISEMENTS—For 1 square of 8 lines, for each insertion, $1; 1 square, per ann., $10; larger advertisements in proportion.

Address, SAMUEL SANDS, Publisher,
At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

Maryland State Agricultural Society's CATTLE SHOW

Will have been held before this No. of our journal shall have reached many of our subscribers. But we hope that every Maryland Farmer who can possibly be present, will lend us his aid and assistance in the good work in which the Society is engaged. We have every indication of a large Show of Stock, and it is anticipated that a most imposing spectacle will be presented.

AGRICULTURAL COLLEGE.

We commend to our readers the *Report on the establishment of an Agricultural College*, under the auspices of the Maryland State Agricultural Society, which will be found in this month's journal. The report is ably drawn, and reflects great credit on the Committee to whom the duty of preparing it was entrusted. The outlines of the plan of the College, are at once liberal and comprehensive, and if carried out with that generous spirit and energy to which it is intrinsically entitled, the means of establishing the institution will be easily acquired. And we sincerely trust that those who may be appointed to procure subscriptions to the stock will not halt until they have accomplished the object in view, an object that appeals alike to patriotism and to interest—and which, if fostered as it should be, will dispense countless blessings not only upon the agricultural community, but upon every other class of society, for let us say what we may, the agricultural productions of a country are its true sources of wealth.

We remarked in our September number that at a trial between Bell's and Hussey's Reapers in England, in 1854, the prize was awarded to the latter. It appears not to have been a contest between those two machines only. It was the regular trial of all reaping machines, including both the American machines, at the annual meeting of the Royal Agricultural Society of England, held at Lincoln this year. The Society's prize was awarded to Hussey's Reaper over all others, and in the language of the Mark Lane Express "*Bell's was pronounced at last fairly beaten.*" It will be recollected that Bell's Reaper received nearly all the prizes in England in 1853. We see also that Hussey's Reaper received the prize at the meeting of the Bath and West of England Agricultural Society again in 1854.

☞The communication of "W. T." will receive attention next month.

Importation of Cotswolds.—Col. J. W. Ware, of Clarke Co. Va., has, we regret to learn, met with a sad disappointment recently in his annual importation of Cotswolds. He imported last year the pen of improved Cotswold Ewes that won the first prize of the Royal Agricultural Society of England, and after getting them home, he was informed that the difference between them and the second prize winners could hardly be distinguished. He ordered over the winners of the second prize, but having been tupped, it was thought prudent not to send them until after lambing, when lambs and ewes both might come this year. He bought the contesting yearling buck, and 5 others that were the best non-contesting bucks—a pen of ewes that won one of the high prizes—it requiring 5 to win a prize,—and 5 ewes that did not contend for a prize—in all, 26; of them, the 10 prize winning ewes, one of the other lot, 4 of the rams, and 2 of the lambs, died on the voyage. Only 9 of the 26 landed alive—fortunately among them the best buck, the contestant for the high prize.

SUDDEN DEATH OF CATTLE.—The Wheeling Intelligencer states that thirty-six head of cattle, valued at $20 per head, the property of Messrs. Gee & Co., of the neighborhood of Bowman's Mill, Rockingham county, died in the course of one night last week. A lot of six hundred and forty were all well in the evening when driven into the field, and thirty-six of them were found dead next morning, without the cause of their death being known.

THE CORN CROP.—Efforts are evidently being made to induce the belief that this crop is not as short as it was sometime since supposed it would be—but we think that there are unmistakable evidences that the crop will not be an average one in the Western and Middle States. North Carolina is perhaps the only exception that we can discover, as to the shortness of this crop—in that State we believe it may be considered a fair average.

FRUIT AND ORNAMENTAL TREES.—We call attention to the advertisement of Messrs. Parvin, Morris & Co., offering at their Nursery, a large variety of Fruit and other Trees. We have no hesitation in recommending the establishment of Messrs. P., M. & Co. to such of our friends as intend to set out orchards.

STEAM ENGINES FOR FARMERS.—We learn that Archambalt's Steam Engine, is now in successful operation in New Castle County, Delaware. It is a portable engine, and is carried from farm to farm threshing grain, &c. We are promised further information in respect to this machine.

THE FAIR AT WHEELING.—We learn from the Intelligencer, that not less than ten thousand persons visited the Fair on the 10th. The address delivered by Alexander R. Boteler, Esq., is represented as having been eloquent, forcible and highly appropriate to the occasion, and was listened to with remarkable attention by the vast crowd.

☞The York County (Pa.) Agricultural Fair has been postponed, and will be held on the 12th and 13th of October.

A LARGE CROP OF WHEAT UPON POOR LAND.—A correspondent of the N. C. Farmer's Journal under date of July 10th, says:

"I have seen this season, the largest crop of wheat raised upon poor land that I ever saw in my life. The wheat to which I allude was produced upon the farm of the Hon. K. Rayner, which is situated about five miles from Winton, on the Chowan river. The manure applied was guano, at the rate of three hundred pounds per acre, and on seventy-five acres of land Mr. Rayner made over sixteen hundred bushels of good heavy wheat. This land has not been cultivated for many years, for it was so very poor that it was thought to be useless to cultivate it. But I cannot believe that this great increase in product is to be ascribed to guano alone, for besides the application of guano, the land was broken up with a double team plow, which had never been done before. Mr. Rayner, with many other farmers in our county, is taking very great interest in agricultural improvement, and the good effects are felt among the general interests of the county. There is quite a spirit of rivalry among the farmers as to who will make the best crop, this year, according to the capital and labor invested."

THE FLAX CULTURE.—It is a curious fact in culture, that while British India is exporting £2,000,000 worth of Flaxseed, throwing away £500,000 of fibre, Ireland is raising to value of £2,000,000 of flax fibre, and rotting in the steep pools £500,000 worth of seed! It is Russia alone that has been benefitting by the ignorance of the Hindoo and the carelessness of the Irish farmer. No part of the valuable plant is allowed by her nobles to go to waste. She sells Great Britain to the value of £3,000,000 of fibre, and £900,000 of seed each year, and does not even take manufactures in return. The Hindoo burns the fibre and Ulsterman rots the seed.

There is now a serious apprehension of a scarcity of foreign seed for next year's sowing in Ireland, and the Belfast Mercury urges Irish farmers, for once to save the seed of their growing crop. Russia furnishes by far the largest portion of what is converted in the oil mills of the United Kingdom, into linseed oil cake, both of which are so widely consumed. Crushed flaxseed is now fifty per cent. dearer than it was in the Summer of last year.—*Phila. Argus.*

USEFUL INVESTIGATIONS.—At the last session of the Legislature of New York, an appropriation of $1,000 was made to the Agricultural Society of the State, to be expended in an examination and description of the insects of the Commonwealth injurious to vegetation. The Board of Managers of the Society have met and appointed Dr. Asa Fitch, of Salem, Washington co., N. Y., to carry into effect the object. During the season, Dr. Fitch is examining chiefly the insects which commit depredations upon fruit trees.

FINE LONG WOOL.—Col. James S. Matson, of Bourbon, left at our office, a day or two since, a specimen of wool which for length and fineness we do not remember to have seen surpassed. It is sixteen inches long, and was taken from the fleece of one of the imported Cotswold Bucks, which he purchased of the North Kentucky Cattle Importing Company last year. The entire fleece when taken from the animal weighed upwards of 21 pounds.—*Lex. (Ky.) Reporter.*

☞ During the session of Friday last of the American Pomological Society at Boston, the committee appointed at the session of 1852, to consider the subject of erecting a suitable monument to the memory of the late A. J. Downing, reported that a fund of $1,600 had been subscribed for that purpose, from gentlemen in Philadelphia, New York, Boston, Rochester, Newburg, Buffalo and other places. It is the design to erect the monument in the public grounds at Washington, which Mr. D. did so much to adorn.

NO CATTLE SHOW.—The Easton, Talbot county Gazette says, in consequence of the "long continued drought," in the greater portion of Talbot and the adjoining counties, it is determined to abandon the Cattle Show which was designed to be held in Easton this fall.

WIRE GRASS.

To the Editor of the American Farmer:

MOSS' NECK, September 27, 1854.

Dear Sir:—I ask the favor of you to publish in the American Farmer, the enclosed letter of Wm. D. Gresham, Esq., to F. G. Ruffin, Esq., Editor of the Southern Planter, that gentleman having declined doing so; "delirant reges, plectuntur achivi," when monarchs err, the people are punished. Now the entire object of the premium in question is for the good of mankind, and years of observation teaches that so far as Wire Grass is concerned, that this supposed eradication cannot be produced in a year, or even two. I fear when the three or five field system tells the tale that fallows will prove a fallacy. I have found four horse plowing with Watts' C and B No. 13 Plows, with heavy Liming (100 bushels per acre,) the more beneficial. yet I fear nothing but chemical application will accomplish the result. I am of opinion its a hard task (as by stiputation of premium) and will cheerfully increase the award to the amount first offered, but, 'old time' must tell the tale of 'joy or sorrow.'

Your obedient servant,

JAS. P. CORBIN.

FRANK G. RUFFIN, ESQ.—Dear Sir:—In the April No. of the Planter, I read a communication from your friend Mr. Staples, upon "the extirpation of Wire Grass," and which is offered for the Corbin premium upon that subject. The entire extirpation of wire grass would not only form a new era in agriculture, but be the means of adding numbers of bushels of grain to many portions of the soil with which it is infested. I have had much difficulty in its destruction, and at all times had supposed that I had surely discovered "*the hidden arcanium.*" I have used some fallows for its destruction, such as peas and clover and thorough liming the land, before fallowing, and which answered very well for the time being, but allowing the land to remain uncultivated or being pastured one or two years, and then ploughed for corn, the same old pest would make its appearance. I believe Mr. Staples' plan of two fallows in one year, will suppress wire grass in the cultivation of a crop of wheat, but so soon as the land is fallowed by a crop of corn, or any crop by which the land will be exposed, wire grass will surely make it appearance, especially in spots where it had mostly infested the field.

Believing that Mr. Staples has found only a temporary remedy for the extirpation of wire grass (at

my rule such has been my experience,) and that his two fallows of buck-wheat and peas, in one year, will cost more than four dollars per acre, (the expressed stipulation upon which the Corbin premium is offered,) must exclude him from obtaining the premium, I have determined to give my experience, not with a view however of becoming a competitor for the premium.

The whole secret of the eradication of wire grass by means of fallows with different crops as recommended by Mr. Staples, and more recently by Judge Christian, will be found in the *shade* of the crops, by which this grass is smothered and apparently killed. No doubt the piece of land of which Judge Christian speaks of being relieved from wire grass, after his two fallows of peas, has been in crops which continued to shade the land.

I have had the same flattering results from the shade of clover, by entirely covering and suppressing the grass by its luxuriant growth, and after many careful examinations had pronounced the pest entirely destroyed, but the succeeding crop of corn has blasted my fond expectations. I believe that *clover, deep ploughing, thorough raking, and the five field system of rotation*, commonly known as the Pamunky rotation, will be found the best *Extirpator* for this pest as well as all the other various pests which spring from the soil. This rotation consists of having two fields in wheat and one in corn, with peas sown broadcast in the young corn. By this rotation this grass is shaded longer by the different crops than I have heard of being practised. for example the 1st year the field is in corn, with peas sown down broadcast in the corn, at its last working, which gives a good fallow to be turned in for the wheat crop. 2nd year it is still shaded by wheat. 3rd year by clover. 4th year by Wheat. 5th year, rest. Thus giving a longer time fer shading the wire grass, and thereby suppressing it. We may eventually hope in conjunction with a proper rotation of crops, deep ploughing, and thorough pulverizing the soil, this direful pest may yet be eradicated. W. D. G.

King and Queen County, July 18th, 1854.

FRANKLIN COLLEGE, GEORGIA—A NOBLE DONATION.

We find the following gratifying intelligence in the Savannah Republican, of which we had been verbally informed before. We also learned that Dr. Lee was promptly elected to the new Professorship—which we think, in honor of the noble and philanthropic donor, should be called "*The Terrell Professorship.*" The addition of Dr. Lee to the College, in that department, is a most important acquisition.—*Augusta (Ga.) Chronicle and Sentinel.*

FRANKLIN COLLEGE—A NOBLE DONATION.—We are in receipt of a letter from Athens, written by an esteemed friend, which communicates some very interesting facts in regard to the College. He informs us that Dr. Wm. Terrell, of Sparta, Ga., has made a donation of twenty thousand dollars to the College, for the purpose of endowing a Professorship of Agricultural Chemistry, and that he has suggested Dr. Daniel Lee, the able editor of the Southern Cultivator, and lately connected with the Agricultural Department of the Patent Office at Washington, as a suitable person to fill the chair. This is certainly a noble donation, and reflects the greatest credit upon the head and heart of the worthy giver. We have long considered Dr. Terrell one of the most enlightened and patriotic men in Georgia—one of the noblest Romans in the State. His career many years ago in Congress, and in the State Legislature, and the interest he has ever evinced for the improvement of our Agriculture, and the general advancement of the welfare of the State, long since marked him out as one of her most useful, as he is one of her most enlightened, men we have. The munificent donation he has just made to the State University, and the laudable object for which it was made, cannot but advance him still higher in the public estimation.

We hope the Trustees will name the new Professorship after the liberal donor, and that others may be induced to follow his example. A beginning has been made—a step has been taken in the right direction—and we will not believe there are not other patriots in the commonwealth—other real friends of improvement—who are prepared to come forward in the support of Education. There is no nobler cause to which we can give our efforts, nor one in which there is a wider scope for the exercise of a laudable ambition.

With liberal aid from the State, which the Legislature must accord, and the endowment by patriotic and wealthy citizens of existing Professorships, the University may be placed in a position to command the best talent and defy every assault.

MULCHING FRUIT TREES.

The New York Agriculturist gives us these facts on this subject:

"We have lately seen several instances of this system which should commend it to general adoption in all cases where there can be any hope of benefit from its use. The first was in an orchard of nearly a thousand apple trees, belonging to L. F. Allen, on Grand Island. The orchard had been planted four or five years, on a hard clay soil, and during the previous seasons had made but little growth, and had scarcely borne an apple. Last spring a large fork full of swamp grass was spread around the trunk of each tree, and the consequence has been constant dampness on the surface of the ground beneath the hay, and a more vigorous growth than it has ever before taken place, while almost every tree is covered with fruit.

Another friend practices mulching with salt hay, which is much better for the purpose than the preceding. This contains an additional ingredient for attracting moisture in the salt combined with it.—Many plants require shade and moisture, and when protected by this will thrive and yield abundantly, which if not thus protected would be entirely unproductive.

The New England Farmer remarks that, "By mulching trees they are placed in a condition similar to the trees in the forest. They are protected from the scorching sun and parching drouth; and they are kept nearer a state of equilibrium of temperature during the various changes from heat to cold and the reverse; of course there will be a more uniform growth and less liability to disease in trees and imperfections in the fruit."

Almost any substitute can be used for this purpose—hay, straw, tan or grass, but we give the preference decidedly to grass—salting it a little if you choose, as retaining the moisture longer and more uniformly, and particularly for attaching itself to the ground. The mulchings should occasionally be renewed, and ought to extend at least eight inches around the stem of the tree. Many a valuable tree has been lost by neglecting to mulch it."

From the Magazine of Horticulture, for September.

HOW TO PLANT A GOOD GARDEN.

There are so many different tastes among those who possess or are about to lay out a garden, that it is a difficult task to give such directions as will render them alike applicable to all. One person may delight only in having a collection of fruits, with few or no flowers, shrubs or trees, from the too prevalent idea that the former are of little use, and the latter injurious to the fruits on account of the shade they give and the room they occupy. Another may take pride only in having a choice display of flowering plants and bulbs, such as beds of verbenas, carnations, petunias, &c., and tulips, lilies, hyacinths, and dahlias. A third prefers a good vegetable garden, with plenty of room for salads, tomatoes, egg plants, cucumbers, corn, &c.; while a fourth, and probably a majority of persons, would prefer to combine the tastes of all these individuals, particularly if not too limited for room. It is therefore to such that we shall mainly direct our hints.

First, then, we will suppose the garden we are to plant to be of some particular size and shape,—say one hundred feet wide, and one hundred and fifty deep—an average for town gardens. This, of course, includes both the front and back garden, with the house and its surroundings,—the whole ground within the enclosure. Gardens of the same form, one hundred and fifty feet wide and two to three hundred feet long, would differ but little in the style of arrangement and planting, only requiring more trees and a larger variety. The principal alteration would be in the size of the interior compartments, which would give more space either for grass, shrubs, fruit trees, flowers, or vegetables. Those of smaller extent than the one first named would differ more. In such, few or no large growing trees should be admitted, but few evergreens, and the vegetable department must be principally given up, if a mixed garden.

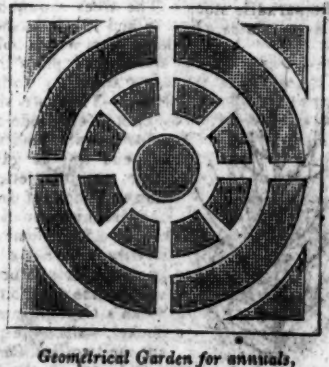
The Front Garden should be devoted wholly to trees, shrubs, and turf. There are but few cases where an intermixture of flowers or flowering plants would be desirable, or would have a good effect. All the surface after trenching, &c., as we have already advised, and the walks staked out, should be sown down to grass, except a border next the street, and on the two boundary sides of five or six feet. If the lot is very small, the house near the street, and immediate effect desired, without regard to expense, it may be tufted over; but if planted with good grass seed,—red top, (*Agrostis vulgaris*), or bent grass, (*A. alba*), and white clover,—it will soon form a green carpet. Whether the walk leads from the gate directly in front of the main entrance to the house, or from one side or both, the whole intervening space should be turf. The places should now be staked out for the trees on the borders, marking each stake with the kind of tree, if a particular effect is desired, or it may be left to the gardener to use his own judgment in the matter; but if the proprietor has any desire to indulge his fancy, marking the stake with the kind of tree will prevent any errors, which some gardeners are too prone to make. The border should be planted in an irregular manner, and not too thick, say averaging a distance of six feet, some being less than four, while others are eight feet distant. Taking out the space for a carriage road from the front to the stable in the rear, if there is one, and the space for a walk, there will be about eighty feet of front border to plant, which will take twelve or fifteen trees or shrubs. Three of these should be Norway spruces, two of them arbor vitæs, two Scotch larches, and one Swedish or Irish juniper. The other six may be a Fringe tree, a Tartarian honeysuckle, Deutzia scabra, Carragana arborescens, and a double white and double red hawthorn. If an immediate plantation is desired to shut out the street more effectually, part of them may be duplicated, or additions made, but it must be recollected that they must be cut away when they begin to crowd the others. The Scotch larch is a good tree to plant for rapid growth, to be cut down as soon as it gets too large. The Virginia creeper may be planted to trail over the fence.

The side borders may be planted in the same way, only increasing the variety. Some Mountain ashes may be introduced, for the cheerful appearance of their red berries in the autumn; the red and yellow crab apple, the double flowering apple, double flowering cherry, Pyrus japonica, Halesia tetraptera, double althæs (two or three kinds), the snowball, the magnolia, Forsythia, Weigelia, Spiræa prunifolia pleno, and trilobata. A few climbing plants may be allowed to run up some of the trees, or trained to neat wire trellises. They may be the Virginia creeper, Celastrus scandens, Clematis, Wistaria sinensis, or some of the prairie roses.

The turf, whether divided by a walk or forming a square or semicircle, may be planted with one or two weeping trees, if a limited space, or three or four of the finest standards may be scattered over it, without destroying its breadth. The best are the weeping Mountain ash, weeping beech, weeping cherry, weeping ash, new weeping willow, weeping sophora, purple beech, tulip tree, &c.

This is all that should be attempted only in gardens of the largest size, where three or four circular beds of different sizes may be cut out of the turf on the side next the house, in which may be planted some of the choicest rhododendrons, azaleas, and kalmias, first preparing the ground by the addition of a little bog earth.

The small piece of ground about the depth of the house, and between it and the boundary on one side, may be laid out in some geometrical form for a flower garden, or it may be turf. If a square or nearly so, the annexed plan, will answer very



Geometrical Garden for annuals, bulbs, or roses.

well, as a more complicated one would cut up the beds too small. It may be planted with annuals, bulbs or roses, or filled with bedding plants in sum-

mer, a list of which, adapted to this object, may be selected from that we gave in our July number, (p. 398,) for the Dropmore garden. If, however, such a garden is thought to require too much labor to keep it in good order, the space may be laid down to grass, planting a handsome tree in the centre, or a group of evergreens. In order to give extent to the grounds, and shut out the back garden, a privet or an arbor vitæ hedge may be planted just in the rear of the house, from one side to the other, leaving spaces for one or more entrances, as may be necessary according to the shape and situation of the buildings. The front garden will then be complete.

THE BACK GARDEN.—Allowing thirty feet for the house and back buildings, there will then remain a back garden of seventy feet in depth by one hundred in width, if there is no carriage road to a stable in the rear—if there is, then a little more than eighty feet. If a road, then the side next the garden may be planted with a row of arbor vitæs or Norway spruces, which will soon shut out the view in this direction. The ground we shall suppose laid out in four squares—that is, a walk within six feet of the boundary, another in the middle, from the front to the back, and one crossing this in the centre. After allowing a six-feet border around each compartment, there will remain four beds about eighteen feet square; these can be devoted to vegetables, laid down to grass, or planted with flowers.

The outside border may be planted with grape vines, selecting the Concord and Diana, the only two fine kinds for a sure crop, to be trained on trellises next the fence, with blackberries, (the Improved High Bush or the Lawton,) which do best where their strong briary shoots can be tied up, or with rasberries. The space in front can be planted with strawberries, or with currants and gooseberries, the latter kept well trimmed so as not to occupy too much space; or it may be filled with choice perennial flowering plants, selected so as to produce blossoms every month from May to November. The six-foot borders will hold about thirty-two trees, planted about eight feet apart, or forty-eight if planted six feet apart, which would answer for pears or the quince, though eight feet is preferable; apple trees grow too large, unless upon the paradise stock. The trees should all be trained as pyramids, (*figs.* 18 and 19) or bushes to keep them within bounds. We should plant thirty-two trees as follows: *Pears.*—These we should set out on each side of the central walk leading to the end of the garden, viz., two Bartlett, two Louise Bonne, of Jersey, one Urbaniste, one Duchess of Angouleme, one Rostiezer, one Beurre Diel, one Glout Morceau, one Beurre d'Anjou, one Swan's Orange, and one Seckel,—all on the quince but the two last *Cherries.*—On one of the other borders running in the direction, plant one Black Tartarian, one Downer, one May Bigarreau, one Black Eagle, one Hovey, and one Bigarreau,—all dwarf trees, branching within two feet of the ground. *Plums.*—On the other border corresponding with this, six plums, viz., Green Gage, White Gage, Washington, Reine Claude Violet, Bradshaw, and Coe's Golden Drop. On the borders of the cross walks will be room for two *Apples*, (dwarf,) two *Quinces*, and four *Peaches*. All the walks may be edged with box or with turf, though the latter will require a good deal of care to keep it neat and within bounds. Box is the most expensive, but the best for all small gardens.

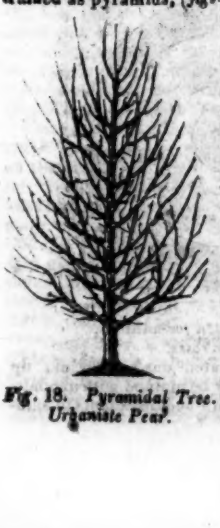


Fig. 18. *Pyramidal Tree. Urbaniste Pear.*

Fig. 19. *Pyramidal Tree—Buffum Pear.*

The interior beds may be devoted to any purpose the proprietor may wish. If the trees are kept neatly pruned, they will not shade the ground to do any injury, and the whole of it, within four or five feet of the trees, may be cultivated, leaving only a space for getting around without treading upon the border. One of them may be planted with asparagus and rhubarb; another with strawberries, and the two others for various crops. The whole ground will then be used to the best advantage, and, if well kept, will afford as much gratification as a garden of this size is capable of for general purposes. Thus we have completed the planting of the grounds.

But if we imagine such a residence to belong to an amateur cultivator, who only wishes to gratify a highly cultivated taste for flowers, how very different would be the arrangement,—and, as offering some hints, we briefly recapitulate the mode in which we will suppose it would be planted.

In the place of the border of grape vines, &c., running parallel with the boundary, would be the finest turf, and on the turf, cut out in circles, or forming scroll work, would be beds planted with the rarest kinds of rhododendrons, azaleas, kalmias, ledums, &c.; a few very choice roses, and single specimens of Magnolia conspicua and Soulangiana, Weigelia, Forsythia, Deutzia gracilis, &c. On the trellis would be trained Wistaria, Prairie roses, Virginia creepers, Celastrus, evergreen honeysuckles, &c., not in the straight-jacket style of formal espaliers, which some gardeners are sure to put them, but rambling in a natural manner, without any other care than just to prevent them from running into wild confusion. A few circles would be reserved for plunging out, in the summer, such plants in bloom as are too tender to stand our winters. A few beautiful vases would be introduced, varying its outline, and giving a finished and artistic appearance to the whole. The four compartments would also be turf, with arabesque figures or circles planted with the finest shrubs and evergreen trees, such as the American holly, the Swedish juniper, *Pinus excelsa*, the Siberian arbor vitæ, Tree pæonies, *Prinos glabra*, Mahonia aquifolium, Clethra alnifolia, the Purple beech, the Laburnum, Cratægus pyracanthifolia, the purple-leaved berberry, the magnolias, &c. These, harmoniously grouped, would at all seasons, even in winter, afford an ever-pleasing scene,

increasing upon acquaintance and nearer inspection of the individual specimens.

The pear is such a delicious fruit that perhaps four or six trees would be introduced in the border at the farther end, planted between arbor vitæs or Norway spruces, the selection being confined to such kinds as are really ornamental from their habit, their beautiful foliage, deep verdure, and, at the same time, fine fruit; such as the Glout Morceau, the Beurre Langelier, the Beurre Diel, and, for its poplar-like head, the Buffum. These are all truly ornamental as many of the maples, beeches, and other trees and shrubs.

This would be the style preferred by some, and those who admire rich foliage, elegant forms, constant verdure, and artistic grouping, will find a suburban garden of this kind one of never failing delight.

WILLOWS AND WILLOW CULTURE.

BY CHAS. DOWNING, NEWBURGH, N. Y.

When we consider the variety of profitable uses to which Willow may be applied, and the extent to which it is cultivated in other countries, the question is suggested, why has so little of it been grown hitherto in the United States? A satisfactory answer may be found in the following considerations: The most vigorous growers of England, whose succulent leaves present a fine delicate texture, are not able to withstand the drying winds and scorching suns of American Summers; consequently the growing is, at the approach of hot weather, either stopped for the season or suspended, until the warm rains of autumn produce an aftergrowth that is so feeble and branching as to be worthless; or, in some varieties, as *Caprea*, the shoots become so rigid and wanting in pliability that they are of little value. *Salix viminalis*, of which more is sold in the money market than of all others, (so popular that it is called *the Osier*,) fails entirely of giving good shoots in this country, although it grows to the size of a tree; and the celebrated *Longskin*, of Nottinghamshire, is no better. The *Bedford* or *Dibley* Willow (*S. Russelliana*) and the *Huntington* branch vary much and are quite inferior.

Thus from the failure of the most esteemed varieties of Europe, in consequence of non-adaptation to our climate, a great discouragement arose at the commencement of Willow culture in this country, which has been in operation from the time it was undertaken at the suggestion of the elder Prince to the present day. But that obstacle has been removed, as well as others of scarcely inferior magnitude; and the way to success has become obvious and easy, and the knowledge necessary to secure it as easily acquired as that of any other culture. A few years since a friend of mine found himself surrounded by circumstances which rendered it very desirable that he should cultivate Willow successfully. He diligently set about a thorough investigation of the subject, determined to bring into his service all available elements of success. In furtherance of this object (chiefly through my agency) he imported every variety of Willow of any note cultivated in Europe, and conducted a suite of experiments with them, in different localities and on various soils. Their economic characters for our climate have been ascertained, and the result is, that among many of considerable value *three* have been found of such general and particular excellence as to rank them above all others, with one remarkable exception soon to be named.

1st. FORBES' WILLOW—*Salix Forbyana*.—Hardy and productive, its rods having almost a leathery toughness; but it does not whiten well, and in consequence its usefulness is greatly abridged. For work where unpeeled rods are used, it is most excellent.

2. LONG-LEAVED TRIANDROUS WILLOW—*S. triandra*.—This whitens beautifully, is very tough and pliable, and grows vigorously with less drainage than any other of good quality. If the soil is very deep, it will grow with almost equal vigor where the ground is very dry; and in addition it has the excellent habit of early ripening the extremities of its shoots, on which acount it is quite hardy in high northern latitudes. With our German basket-makers it is a general favorite, particularly for split work. As an ornamental tree it is also deserving of attention.

3d. PURPLE WILLOW—*S. purpurea*. This is the representative of a large class, and appears to be far more valuable for osiers in America than in England, where it is represented as giving shoots of from three to five feet in length. I have standing by me a bundle of its shoots, from cuttings planted last spring, that average more than six feet; and another bundle, from established plants, of nearly ten feet. They were grown with good, but not extraordinary culture, and any good field may easily do as well. It is much more fastidious in its habitat than either of the preceding—delights in richness, depth, and moisture, but does not tolerate excess of wetness. When well established, it has but one superior in productiveness, and may easily be made to yield four tons per acre of the most excellent tops, particularly for fine whole work, for which it has no superior. For live fences it is very valuable, and in England is "extensively used for fences for the exclusion of hares and rabbits, as well as cattle, the bark and leaves being so intensely bitter that they will touch neither, while the shoots being long, tough, and flexible, may be formed into any shape; and a fence of this kind is reckoned little if at all inferior to that made of wire, which, when made close enough to exclude small animals, and strong enough to form a barrier against large ones, is very expensive."

The subject of Willow for fences is so extensive and important, that I shall leave that for an entire article, remarking, by the way, that on the great western prairies it will soon be found to be invaluable, not only for fences, but for shelter from the sweeping winds. A screen of twenty-five feet in height may be grown from Willow cutting in five years, and at a slightly retarded rate of annual increase until a height of sixty feet is gained; thus almost immediately affording that "shelter which is so indispensable at all seasons of the year, that there is no safety without it."

Salix Caprea, although of but little consideration as an osier, may claim attention in other respects. It will grow vigorously in very wet situations, where other Willows will not live, and its large showy catkins, which it produces very early and in the greatest abundance, furnish food for bees at a time when it is most needed. In Europe, where honey is an important article of produce, it is greatly prized for that purpose, and often makes the entire difference between an abundant yield and an entire failure, by saving the bees from starvation, coming as it does with the first warm weather which calls the bees from their hives, and before any other flowers appear. But in this respect *caprea* is about to be

eclipsed by a new variety that by rare good fortune was, in the course of Dr. Grant's investigations, procured from England, which proves to be a great acquisition, not only in the arts, but as an ornamental tree. It is perfectly adapted to the climate of the United States, and is much more vigorous and productive than any other variety known. Cuttings of the size of a pipe stem, six inches long, planted last April, made during the season, shoots 11 feet long. Its rods are very slender, comparatively, and vary less in size "from butt to tip" than any other with which I am acquainted. "In early spring, before other flowers appear, excepting the *Magnolia Conspicua* and *Cydonia Japonica*, this tree is a mass of dazzling bloom, its immense catkins exhibiting all the brightest hues of the rainbow." The remarkable vigor of this Willow, together with its hardiness and beauty, constitute it the best material for live fences that has yet been discovered, where the soil is suited to its growth; for example, on the deep rich soil of the western prairies, and on the bottoms where fences are liable to be swept off by freshets. It will thrive in *any* soil that is *deep and rich*, and for a garden enclosure I cannot conceive anything more attractively beautiful than a hedge of this Willow. After the gloom of winter has passed, it affords the first cheerfully inviting scene of spring—its gorgeous flowers, covered with bees, filling the air with the joyous murmuring of their music; and its dense, rich foliage is the last to yield to the saddening influence of early winter. The cultivation of this Willow for hoops may perhaps be worth attention. It will yield once in two years about forty thousand poles to the acre. One whose judgment is worthy of all confidence, writing from England, says that "as an osier it is better than all other varieties," and the experience of the past two years proves it of equal excellence here.

*English Flora.

WHAT A WHOLE CROP CARRIES OFF.

Below we give another chapter from Johnston's 'Elements of Agricultural Chemistry and Geology,' which we think will be found interesting to every reader. There are few techinal terms employed, and the author's meaning is made clear by the use of forcible and perspicuous language :

The importance of the inorganic matter contained in living vegetables, or in vegetable substances when reaped and dry, will appear more distinctly if we consider the actual quantity carried off from the soil in the series of crop.

In a four years' course of cropping in which the crops gathered amounted per acre to—

1st year, Turnips, 20 tons of bulbs and 6½ tons of tops.

2d year, Barley, 40 bushels of 63 lbs. each, and 1 ton of straw.

3d year, Clover and Rye-Grass, 1½ ton of each in hay.

4th year, Wheat, 25 bushels of 60 lbs. and 1¾ tons of straw.

1°. The quantity of inorganic matter carried off in the four crops, supposing none of them to be eaten on the land, amounts to about—

Potash,	317 lbs.
Soda,	54 "
Lime,	193 "
Magnesia,	55 "
Oxide of iron,	15 "
Silica,	356 "
Sulphuric acid,	108 "
Phosphoric acid,	116 "
Chlorine,	70 "
Total,	1284 "

or in all about 11 cwt.; of which gross weight the different substances form unlike proportions.

2°. A still clearer view of these quantities will be obtained by a consideration of the fact, that if we carry off the entire produce, and add none of it again in the shape of manure, we must or ought, instead, if the land is to be restored to its original condition, to add to each acre every four years—

Dry Pearl-ash,	465 lbs.
Common bone-dust,	552 "
Epsom Salts,	336 "
Common Salt,	116 "
Quick-lime,	70 "
Total,	1539 "

Several observations suggest themselves from a consideration of the above statements.

First, That if this organic matter be really necessary to the plant, the gradual and constant removal of it from the land ought, by and by, to make the soil poorer in this part of the food of the plants.

Second, That the more of the crops which grow upon the land we return to it again in the form of manure, the less will this deterioration be perceptible.

Third, That as many of these organic substances —the potash, soda, &c.,—are ready soluble in water, the liquid manure of the farm yard, so often allowed to run waste, must carry with it to the rivers much of the saline matter that ought to be returned to the land.

Fourth, If the rains also are allowed to run off and wash the surface of the soil, they will gradually deprive it of those soluble saline substances which appear so necessary to the growth of plants. Hence one important benefit of a system of drainage so perfect as to allow the rains to sink into the soil where they fall, and thus to carry down, instead of away, what they naturally dissolve.

And, *lastly*, That the utility, and often indispensable necessity, of certain artificial manures, though, in some districts, perhaps, arising from the natural poverty of the land in some of the mineral substances which plants require—is most frequently owing to a want of acquaintance with the facts above stated, and to the long continued neglect and waste which has been the natural consequence.

In certain districts, the soil and subsoil contain within themselves an almost unfailing supply of some of these inorganic or mineral substances, so that the waste of them is long in being felt; in others, again, the land contains less, and therefore becomes sooner exhausted. This latter class of soil requires a more careful, and usually a more expensive mode of cultivation than the first; but both will become at length alike unproductive, if that which is yearly taken from the soil is not in some form or other restored to it.

One thing is of essential importance to be remembered by the practical farmer—that the deterioration of land is an exceedingly slow process. In the hands of successive generations a field may so imperceptibly become less valuable that a century may elapse before the change prove such as to make a sensible dimunition in the valued rental. Such slow changes, however, have been recorded; and hence the practical man is cau-

to despise the clearest theoretical principles, because he has not happened to see them verified in his own limited experience; and to neglect, therefore, the suggestions and the wise precautions which these principles lay before him.

The special agricultural history of known tracts of land in different qualities, showing how they had been cropped and tilled, and the average produce in grain, hay, and stock every five years, during an entire century, would afford invaluable materials both to theoretical and to practical agriculture.

General illustrations of this sure though slow decay may be met with in the agricultural history of almost every country. In none, perhaps, are they more striking than in the older Slave States of North America. Maryland, Virginia and North Carolina—once rich and fertile—by a long continued system of forced and exhausting culture, have become unproductive in many places, and vast tracts have been abandoned to apparently hopeless sterility. Such lands it is possible to reclaim, but at what expense of time, labor, manure and skilful management! It is to be hoped that the newer States will not thus sacrifice their future power and prospects to present and temporary wealth—that the fine lands of Ohio, Kentucky, and the Prairie states, which now yield Indian corn and wheat, crop after crop, without intermission and without manure, will not be so cropped till their substance is gone, but that a better conducted and more skilful husbandry will continue, *without diminishing the present crops*, to secure a permanent fertility to that naturally rich and productive country.

PRACTICAL DEDUCTIONS TO BE DRAWN FROM A KNOWLEDGE OF THE INORGANIC CONSTITUENTS OF PLANTS.

Several important practical deductions are to be drawn from what has been stated in regard to the inorganic constituents of plants.

1°. *Why one crop may grow well where another fails.*—Suppose, for example, a crop to require a peculiarly large supply of potash—it may grow well if the soil abound in potash; but if the soil be deficient in potash and abound in lime, then this crop may scarcely grow at all upon it, while another crop to which lime is especially necessary may grow luxuriantly.

2°. *Why mixed crops grow well together.*—If two crops of unlike kinds be sown together, their roots seek in the organic substances in different proportions—the one more potash and phosphoric acid perhaps—the other more lime, magnesia, or silica. They thus interfere less with each other than plants of the same kind do—which require the same kinds of food in nearly the same proportions.

Or the two kinds of crop grow with different degrees of rapidity, or at different periods of the year; and thus, while the roots of the one are busy drawing in supplies of inorganic nourishment, those of the other are comparatively idle; and thus the soil is able abundantly to supply the wants of each as its time of need arrives.

3°. *Why the same crop grows better on the same soil after long intervals.*—If each crop demands special substances, or these substances in quantities peculiar to itself, or in some peculiar state of combination, the chances that the soil will be able to supply them are greater, the more distant the intervals at which the same crop is grown upon it. Other crops do not demand the same substances, or in the same proportions; and thus they may gradually accumulate on the soil till it becomes especially favorable to the particular crop we wish to grow.

4°. *Why a rotation of crop is necessary.*—Suppose the soil to contain a certain average supply of all those inorganic substances which plants require, and that the same corn crop is grown upon it for a long series of years—this crop will carry off some of these substances in larger proportion than others, so that year by year the quantity of those which are thus chiefly carried off will become relatively less.—Thus at length the soil, for want of these special substances, will become unable to bear a corn crop at all, though it may still contain a large store of the other inorganic substances which the corn crop does not especially exhaust. Suppose bean or turnip crops raised in like manner for a succession of years, they would exhaust the soil of a different set of substances till it became unable to grow them profitably, though still rich perhaps in those things which the corn crop especially demands.

But grow these crops alternately, then the one crop will draw especially upon one class of substances, the other crop upon another; and thus much larger crops of each will be reaped from the same soil, and for a much longer period of time.

On this principle the benefit of a rotation of crops in an important degree depends.

5°. *What is meant by exhaustion.*—Thus, exhaustion may either be *general*, arising from the gradual carrying off of all the kinds of food on which plants live—or special, arising from the want of one or more of those substances which the crops that have been long grown upon it have specially required.

To repair the former exhaustion, an addition of many things to the soil may be necessary; to repair the latter, it may be sufficient to add a needful supply of one or more things only. In showing how this may be most efficiently and most economically done, chemistry will be of the most essential service to the practical man. Before entering further upon this point, however, it will be necessary to study also the nature of the soil in which plants grow.

BONES AS A MANURE.

Professor Newton says:—"There is one important part of the animal yet unnoticed, that is the bones. Their composition is, when dry, earthy matter about 66 lbs. in 100; organic matter that burns away, about 34 lbs.

"This earthy matter consists for the most part of phosphate of lime, that is, lime in combination with phosphoric acid. These are two most valuable substances for application to any soil.

"The organic part is called gelatine or glue, this is boiled out by the glue-makers; it is extremely rich in nitrogen, and is therefore an excellent manure. We thus see, at once, how important a source of nourishment for our land is to be found in bones. They unite, from the above statement, some of the most efficacious and desirable organic and inorganic manures. Both of these parts are fitted to minister powerfully to the growth of the plant.

The most important form of applying bones, is in a state of solution by sulphuric acid (oil of vitriol.) This is a cheap substance costing by the carboy not more than 2½ to 3 cts. per lb. To every 100 lbs. of bones, about 50, or 60 lbs of acid is taken. If bone dust issued, from 26 to 45 lbs. of acid is sufficient. The acid must be mixed with two or

three time its bulk of water, because if applied strong, it would only burn and blacken the bones, without dissolving them.

The bones are placed in a tub, and a portion of the previously diluted acid poured upon them.—After standing a day, another portion of the acid is poured; and finally the last on the third day, if they are not already dissolved. The mass should be often stirred.

One good way is to place the bones in a heap, upon any convenient floor, and pour a portion of the acid upon them. After standing half a day the heap should be thoroughly mixed, and a little more acid added; this to be continued so long as necessary. It is a method which I have known to prove very successful.

In either case the bones will ultimately soften and dissolve into a kind of paste; this may be mixed with twenty or thirty times its bulk of water, and applied to the land by means of an ordinary water cart. Used in this way, it produces a wonderful effect upon nearly all the crops.

A more convenient method in most cases is to thoroughly mix the pasty mass of dissolved bones with a large quantity of ashes, peat-earth, saw-dust or charcoal dust. It can then be sown by hand, or dropped from a drill-machine. Two or three bushels of this method to one of dissolved bones with half the usual quantity of yard manure, are sufficient for an acre. This is therefore an exceedingly powerful fertilizer. One reason for its remarkable effect is, that the bones are, by dissolving, bro't into a state of such minute division that they are easily and at once available for the plant. A peculiar phosphate of lime is formed, called by chemists super phosphate, which is very soluble; and in addition to this we have the sulphuric acid, of itself an excellent application to most soils."

I would particularly recommend farmers to experiment with bones dissolved in sulphuric acid.—The dissolving them is a simple business.

The cheapness of this manure is a great recommendation. Two bushels of bones would not certainly cost more than $1; * then say 50 pounds of acid to dissolve them, would cost by the carboy, $1.50, making only $2.50 for a quantity quite sufficient for an acre, with half the usual dressing of farm yard manure. It would be worth almost as much as this, to cart the common manure from the yard, to say nothing of its value. There are few farms on which bones enough might not be collected in the course of the year, to help out in this way the manuring of several acres.

It is calculated by Prof. Johnston, that a cow giving 20 quarts of milk per day, takes from the soil 2 lbs. of phosphate of lime or bone earth in each week. There would thus be required three or four pounds of bones to make good this loss. If it is not made good in some way, the rich grasses after a time cease to flourish, being succeeded by those which require less phosphate of lime, and therefore do not furnish when eaten by the cow, so rich or so abundant milk."

[* They are scarce here, and difficult to be had at 60 cts. per bushel.—*Ed. Am. Farmer.*]

CLASSIFCATIONS OF MANURES.

The following classification is taken from Stockhardt's Field Lectures. The best manures are given first.

1. *Manures rich in Nitrogen.*

1. Substances containing ammonia, (very foreing.) Ammoniacal salts of all sorts, coal gas, urates, soot, putrid animal substances, such as blood, flesh, skins, &c.; poudrette, gas-water, putrid urine, draining compost, fermented stable manure, especially of sheep and horses.

2. Azotized substances that are easily decomposed, (somewhat quickly forcing)—Horn-shaving, glue, boiled flesh, bones liquified by steam, steamed and highly pulverized, oil-cakes of all sorts, malt-grain and the refuse of beer-breweries, fresh urine, drainings, stable manure beginning to rot.

3. Substances that are decomposed with difficulty, (slowly forcing.) Bone-dust powdered coarse, woollen rags, fresh stable manure.

4. Substances containing nitric acid, (quick forcing.) Nitrate of potash, (common saltpetre,) nitrate of lime; or decayed stable walls, rubbish of old clay walls, and old compost earth.

II. *Manures rich in Carbon:* (forming humus.)

Stable litter, straw, foliage, weeds, forest leaves, saw-dust, lawn and garden trimmings, rotten sward, turf, earthy brown-coal, and vegetable substances of nearly all sorts.

III. *Manures containing Potash:* [strongly forcing.]

Potash, nitrate of potash, malt grain from breweries, urine from breeding cattle, wood ashes, foliage, stalks and leaves of all sorts, lawn and garden trimmings, building rubbish, street sweepings, compost, burnt clay and loam, marl of many sorts.

IV. *Manures containing Soda:* [less visibly operative.]

Common salt, refuse salt, Chili saltpetre, soap boilers' lye, urine, certain sorts of manuring ash, soda feldspar, and some other kinds of stone, soap suds, dish-water.

V. *Manures rich in Phosphoric acid:* (seed bearing.) Burnt bones, bone black, sugar refuse from refineries, phosphorite, and a few other kinds of stones, poor guano, raw bones, bone dust, tree-guano, animal substance of all kinds, oil cake, malt grain from breweries, solid human and animal excrements, stable manures, urine of carniverous animals, wood ashes, straw, leaves, &c.

VI. *Manures containing Sulphuric Acid:* (partly direct manures, partly absorbent of manufacturing substances.)

Gypsum, sulphuric acid, green vitriol, sulphur coal, ashes of pit-coal, turf, and brown coal.

VII. *Manures rich in Lime:*

Burnt lime, chalk, marl, gypsum, ashes of brown coal and turf, building rubbish, pond mud, soap boilers' ashes.

VIII. *Manures rich in Silica:*

Pit-coal ashes, as also ashes of all sorts, malt, straw, stable-manure, &c.

IX. *Manures that pulverize the soil:*

Sulphuric acid, muriatic acid, lime, marl, loam, &c.

X. *Manures that Improve the Soil:*

Lime, marl, loam, sand; pond mud, vegetable mould, turf, &c.

Here is a fine classification of the chief manures that are employed as fertilizers.—They should be chosen and applied according to the nature and condition of the soil as well as with reference to the crop that is to be produced. Many of these manures are compounds—hence the reason why we find them repeated in the different classes. The farmer should preserve this classification and use it until he finds a better one.

FLORAL DEPARTMENT FOR OCTOBER, 1854.

Prepared for the American Farmer by Jno. Feast, Florist, Lexington street.

This month much preparation is required in removing and transplanting all tender plants that will not endure the winter; and in placing them in the houses in their proper places, they will cast a greater part of their foliage if not properly lifted and managed right. After repotting, they should be kept in the shade until they are quite recovered, as some plants make so much root when in the open ground, it is impossible to get them up so as to maintain the same appearance as before, which is not for want of skill in the management; but others again may be removed with safety and put in the house without showing any bad appearance, except that the change of atmosphere will make some of the foliage decay—but a plant should be well watered at first after removal, which is the only means to secure success.

About the middle of the month, plants will have to be housed, and some that are tender, before that time, but much depends on the weather; but when in the house give plenty of air every fine day, and syringe frequently, for so much watering at the root is not good where the plants are not in a growing state, and often cast their buds, which might have been prevented.

Camellias.—The buds will be much enlarged by this time, and an early blossom will soon be at hand—those that are forward, place in an open situation rather shaded from the mid-day sun, and syringe at times to keep the plants in a healthy condition, and about the end of the month should the weather prove cold, keep up the temperature, with very moderate fire heat. At this season all Greenhouse plants, require a higher temperature, otherwise they become dormant, and check the flowering, and frequently they lose all the buds, when not kept in a growing state.

Bulbous Roots, for flowering through the winter and spring, repot now, and do not give too much water at first, till they begin to grow, otherwise many times they decay, and show no signs of growth.

Dahlias, take up as soon as the tops are destroyed, and place in a proper situation for the winter. Bulbous roots, as Hyacinths, Tulips, &c., plant now in the open ground, and those in the borders take up and keep in a dry place. Transplanting may be done of every thing now that is required; and now is the best time to put down Box Edging from roots or cuttings.

ACTION OF LIME.

At a weekly Council of the Royal Agricultural Society of England, Professor Way delivered before the members a lecture on the results of a nine months' investigation into the conditions under which lime affects the absorptive power of soils in reference to ammonia. These results were numerically represented in a small table, containing only four vertical columns, intersected by as many horizontal spaces; but would prove as Professor Way remarked, of a permanent value, worth all the time and labor bestowed upon their production if they should be found to lead to the establishment of any new principle in Agriculture. His lecture was chiefly occupied in the discussion of these results, and of the clue they might possibly give to explanations of the mode in which lime acted upon soils as a manure. The two principal facts ascertained by these experiments appeared to be the following: 1. That all clay soils, more or less, even beyond the depth of 20 feet, are found to possess a certain quantity of ammonia, derived, as Professor Way supposes, from the fishy and vegetable matter of beds of lakes or rivers, no bed of clay whatever, he thought being entirely free from ammonia. 2. That the addition of lime to a soil set free one-half the ammonia it contained; thus acting, in the first instance, as a 'stimulant' to vegetation, but as an exhauster of the stock of ammonia already in the soil, or to be slowly derived from the atmosphere, if applied in large quantities. The two principal recommendations were—1. That liming should take place periodically at short intervals, not more than from 8 to 10 bushels per acre being used every year, or every two years; lime would, under such circumstances, he thought, be found to be one of the most useful adjuncts of the farm. 2. That lime when slaked and mixed with water, forming what was known as 'milk of lime,' should be added to tank-water, and distributed by means of piping, as in the case of Mr. Mechi's operations at Tiptree, or Mr. Kennedy's at Myree Mill. Prof. Way, in the course of this lecture, entered into most interesting details connected with the chemical machinery of the double silicates in the soil, by which the action of lime was regulated; and with the experiments he had instituted for showing, in strong comparative contrasts, the results he had obtained. He also pointed out the great importance of giving to land, by means of suitable cultivation, that condition under which it would best act as an absorbent of ammonia from the atmosphere. He has drawn up a complete statement of these details, which will be submitted in due course to the members."

A PUBLIC BENEFACTOR.—He is a public benefactor who, by the prudent and skilful outlay of his money in bettering its condition, shall make a single field yield permanently a double crop; and he who does this over a square mile virtually adds a square mile to the national territory—nay, he does more, he doubles in extent the territorial resources of the country, without giving the State any larger actual area to defend.

All hail, then, to improvers of the soil! health and long life be their fortune—may their hearts be light and their purses heavy—may their dreams be few and pleasant, and their sleep the sweet repose of the weary—may they see the fruits of their own labor, and may their sons reap still heavier harvests. —*Blackwood's Magazine.*

MORE IMPORTED STOCK.—S. W. Jewett, of Middlebury, Vermont, has lately returned from Europe, where he had been spending the season, with more French Sheep, Suffolk swine, of Prince Albert's stock, a large collection of fowls, comprising Dorking, Spanish and Normandy breeds. He also brought three varieties of the Basket Willow.

SHEEP RAISING IN VIRGINIA.—The Charlottesville (Va.) Advocate learns that many of the Piedmont farmers have determined to sow only small crops of wheat until the joint worm is eradicated, and to occupy their lands with raising sheep and growing wool. The demand for sheep in Eastern Virginia will afford a good market for the great surplus of the western and southwestern counties.

THE HORSE! THE HORSE!!

NOBLEST OF DOMESTIC ANIMALS,

AND the one most frequently ill-treated, neglected, and abused. We have just published a book so valuable to every man who owns a Horse, that no one should willingly be without it. It is entitled,

THE MODERN HORSE DOCTOR,

And is from the pen of that celebrated English Veterinary Surgeon, Dr. GEO. H. DADD, well known for many years in this country as one of the most successful, scientific, and popular writers and lecturers in this branch of medical and surgical science. The book which he now offers to the public is the result of many years' study and practical experiences, which few have had.

From the numerous and strong commendations of distinguished men and the newspaper press, we select the following:

Extracts from a letter from Hon. John H. Clifford, Ex-Governor of Massachusetts.

NEW BEDFORD, May 11, 1854.

DR. DADD—Dear Sir:—I hope your new work on the noblest creature that man has ever been permitted to hold in subjection, (the Horse) will meet with that success which all your efforts in this direction so well deserve.

Your obedient servant,
JOHN H. CLIFFORD.

From Hon. Marshal P. Wilder.

BOSTON, May 13, 1854.

DR. DADD—Dear Sir:—I am greatly obliged to you for the valuable treatise, the results of your investigations, which you have recently issued, hoping that it may meet with the patronage of a discriminating community.

I remain yours with great regard,
MARSHALL P. WILDER.

The Modern Horse Doctor, by Dr. G. Dadd, is a manual o genuine science, and ought to be owned and studied on the score of humanity, as well as interest, by every man who owns a horse.—*Boston Congregationalist.*

Dr. Dadd has had great experience in the cure of sick horses, and explains the secret of his success in this vol.—*N. Y. Tribune.*

The author of this work is well known as a most skillful veterinary surgeon. His book is based on the soundest common sense, and as a hand book for practical use, we know of nothing to compare with it.—*Yankee Blade.*

We know Dr. Dadd well, and are satisfied that he possesses most important qualifications for preparing such a book as this.—*New England Farmer.*

Messrs. Jewett & Co. have just published a very valuable work by Dr. Dadd, a well known veterinary surgeon, on the causes, nature and treatment of diseases and lameness in horses.—*Farmers' Cabinet.*

This is one of the most valuable treatises on the subject ever published; and no owner of that noblest of the animal race, the horse, should be without it. Especially should it be in the hands of every hotel and livery stable keeper. To many a man would it be worth hundreds of dollars every year.—*Ind. Democrat, Concord.*

By far the most learned and copious work on the horse and his diseases we have ever seen.—*N. Y. Evangelist.*

One of the greatest and most commendable qualities of this work is, it is *practical* and plain to the comprehension of those farmers and others for whom it is mainly designed.—The course of treatment favors generally a more sanative and rational system of medication than that recommended in any previously existing works on farriery. No farmer or owner of a horse should be without this book. Stable keepers, stage proprietors and hackmen we believe would derive profit by having at least one copy hung up in their stables for use and reference by their stable men.—*Daily News, Philadelphia.*

There is more common sense in this book than any of the kind we have ever seen, and farmers and owners of horses would find it a matter of economy to possess themselves of it. It will be of more service than the counsel of a score of ordinary doctors.—*Albany Courier.*

We deem this decidedly the best and most reliable work on the "Cause, Nature, and Treatment of Disease and Lameness in horses," ever published.—*Nantucket Inquirer.*

What we have read of this book induces us to regard it as a very sensible and valuable work; and we learn that those much more qualified to judge of its value have given it their unqualified approval.—*Bo. Traveller, Boston.*

This book supplies a great desideratum which Skinner's admirable treatise on the Horse did not fill. Every man may be his own veterinary surgeon, and with much greater safety to this noble animal than by trusting him to the tender mercies of the empirical itinerants who infest the country. It is well illustrated and should be purchased by every man who owns a horse.—*Ev. Mirror, N. York.*

This is a book which should be forthwith put into the hands of all who own or drive horses, whether for the duty or for the plow, omnibus or road, for hard service or pleasure.—*McMakin's Courier, Philadelphia.*

A good, clearly written book, which should be in the hands of every man who has a horse whose life and affection or his purse make it worth while to cure.—*Bangor Mercury.*

This is a scientific, thorough, and complete treatise upon the diseases to which one of the noblest animals is subject, and the remedies which they severally require.—*Troy Daily Budget.*

It is a valuable book to those who have the care of Horses.—*Hartford Herald.*

He is not worthy to have a horse in his care, who will not use such a work to qualify himself for his duties to this animal.—*Commonwealth, Boston.*

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C. H. D. will this year make a smaller size Power & Thresher, (price of Power, $100, Thresher, $50, Band, $10, or when taken together, complete, $150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. ap

EVERY MAN HIS OWN CATTLE DOCTOR.—C. M. SAXTON, No. 152 Fulton Street, New York, has just published the *Seventh Thousand* of DADD'S GREAT WORK ON CATTLE—THE AMERICAN CATTLE DOCTOR, containing the necessary information for Preserving the Health, and curing the diseases of Oxen, Cows, Sheep and Hogs, with a great variety of Original Recipes and valuable information in reference to the Farm and Dairy Management, whereby every man can become his own Cattle Doctor.—By G. H. Dadd, M. D. Veterinary Surgeon, and Author of "The Modern Horse Doctor." Price, One Dollar, and sent free of postage. C. M. SAXTON, Publisher,
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I OFFER for sale my Farm in Halifax County, on the waters of *Dan River*, containing (by recent survey) 242 acres, 80 of which is very finely timbered in original growth, 45 acres of fine river bottom, and the remaining portion of the land in good order, and is adapted to the growth of tobacco, wheat, corn, oats, &c. The improvements consist of a dwelling house containing 9 rooms, and the necessary out-houses, barns, &c. The dwellings are somewhat out of repair, but could be put in a perfect state of repair with $300 or 400. The situation is a beautiful one as could be desired, having a fine river scenery, and located on an eminence. The neighborhood is pleasant and healthy. This farm is about 191 miles distant from Charlottesville, and within seven miles of a depot on the Richmond and Danville Railroad. As it does not suit me to reside on it, I offer it at a sacrifice, my price is $10 per acre. Address me at Lynchburg, Va. oct 1-1t* J. N. GORDON.

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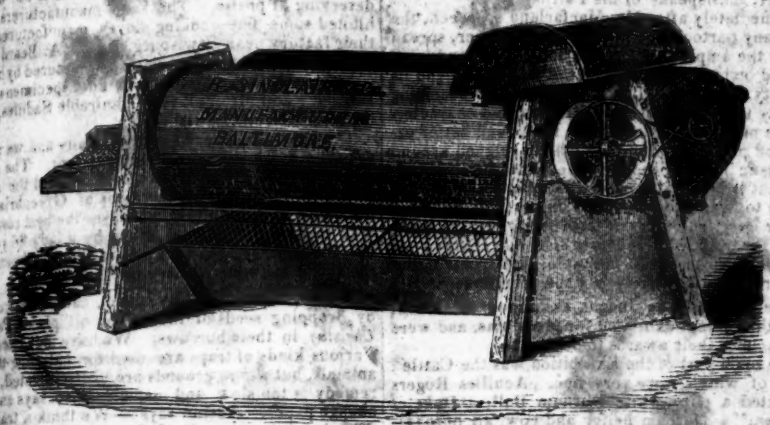

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Of Plows we make and sell an endless variety of sizes and sorts. The most approved are the Maryland Self Sharpening; H. M., or improved Davis Plow; the Patuxent Plow, Nos. 7, 8, and 9; Minor and Horton; and for seeding and covering Guano, the Echelon, or Three Furrowed Plow.

HARROWS,

Of all sorts, including the Geddes and Maryland Hinge.

CULTIVATORS,

Expanding, Stationary, &c.

ROLLERS,

With 2 and 5 Segments, surface flat; Serrated Clod Roller, new and valuable.

Also, Ox Yokes and Bows, Cattle Ties, Bull Rings, Chain Pumps, Garden Engines, Thermometer Churns, Agricultural Furnaces and Boilers, Horse Dirt Scoops, Sausage Stuffers, Sausage Cutters, Apple Pearers, Bush and Bramble Hooks, Scythes, &c.; Grindstones, hung on Friction Rollers.

GRASS SEEDS,

Including all the best American and European, for Hay, pasturage, or ornament.

GARDEN SEEDS,

A large and general assortment.

FRUIT AND ORNAMENTAL TREES.

These will be delivered to order after the 20th October. ☞ CATALOGUES to be had at the Office.

R. SINCLAIR, Jr. & CO.

sep 1 Manufacturers and Seedsmen, Balt.

GREENBRIAR AGRICULTURAL FAIR.

J. A. Cowardin, Esq., of the Richmond Dispatch, who was present at the Greenbriar Agricultural Fair, writing home to his paper of the 8th of September, thus speaks of the Fair:

Immediately after Mr. Macfarland's speech, the company partook of a most capital dinner, spread under the ample shade of the noble oaks, and were waited on by the gentle ladies of Lewisburg and its vicinity, with an obliging manner and becoming dignity that gave to the feast a marked character. I have never enjoyed a dinner more, and better order and propriety than that which reigned around the rustic board of the grove could not be observed.

What is better still, and what offers a noble example to farmers' wives, this dinner was prepared by the excellent ladies of Greenbriar, for the benefit of the Fair. A moderate sum was charged for each person who ate at the table; and I learn that their receipts will likely pay the premiums!

After dinner, the Judges examined the stock, and other things exhibited for premiums, and were to announce their awards to day.

The main part of the Exhibition was the Cattle; some of which were very fine. Achilles Rogers exhibited a pure white Durham Bull, "*Duke of Bourbon*," a Durham heifer and cow, all purchased in Bourbon county, Kentucky, of Brutus J. Clay, a famous raiser of Cattle, and President of the County Agricultural Society of Bourbon. The cow was an enormous animal—so very fat that some of the huge lumps about the hips looked like deformities.

Mathew Arbuckle exhibited a fine Durham Bull, bought of Gen. Meem of Shenandoah.

Mrs. Collison, Mr. Dunn, of Lewisburg, Mr. John T. Johnson, Mr. Hawyer and others exhibited some remarkably fine cows, calves and other cattle.

Mr. Joseph Feamster a full blooded Devon Bull; Mr. Ludington two pens of three year old and four year old fat cattle, the latter averaging upwards of 1700 lbs. each.

A yoke of very fine young red oxen was exhibited by George Lewis. They were remarkably well broken. A boy twelve years old drove them with ease. Mr. Matthew Arbuckle exhibited a pair of beautiful twin brindled oxen, so near alike that they could hardly be distiuguished from one another.

The display of horses was not so good as had been expected, Greenbriar being one of the greatest horse raising counties in the State. Her horses are however more remarkable as strong and quick draught and riding horses than for the turf. The display of brood mares was good.

There were very few sheep, and they not worthy of especial notice.

A Bernese Bull attracted some notice. This breed is calculated for the lower districts of country. They thrive on scant fare, and live where the Durham would decline and die.

In the department of Household Industry, the Exhibition was highly creditable. I noticed very admirable carpetings by Mrs. Kincaid, Mrs. Feamster and Mrs. Johnson E. Rell.

The worsted work, the embroidery and raised work, were fine, and did honor to the ladies of Greenbriar. I noticed especially an embroidered table cover, worked by Mrs. Alderson, a very admirable affair.

Among the remarkable things was a pair of yarn socks, knitted by a lady 86 years old! Our young ladies could hardly equal her.

Agricultural Implements—ploughs, corn-shellers and straw-cutters, by Skeen, Abraham & Co. were deserving of praise. The same manufacturers exhibited some fine cooking stoves manufactured at their factory near Lewisburg. John A. Beard exhibited a very good wheat drill manufactured by him.

James Withrow exhibited fine specimens of Leather; and Mr. Zoll very admirable Saddles, all manufactured in Lewisburg.

The Fair was a very good first Fair, and we may expect a more extensive one next year. The success this year is highly encouraging, and the zeal displayed by our fellow-citizens of Greenbriar in the cause of Agriculture, promises the best results.

In speaking of the socks knit by a lady 86 years old, the writer might have added that the yarn for the socks was spun by the same lady.

MOLES, it is confidently stated, can be destroyed by dropping seeds of the castor oil plant (*Palma Christa*) in their burrows. We have not tried it. Various kinds of traps are used for catching these animals, but where grounds are badly infested, this remedy is too slow and inefficient—so says an exchange paper. Auston says:—We think a trail of dropping into the runs of the moles, small pieces of red herring, will be found to be an effectual remedy. As new runs appear, place a few bits of the herring in them.

THE BALTIMORE MARKET—SEPT. 30.

The intelligence from Europe, by late steamers, induce the belief, that the crops of England and the Continent have been generally housed in good order, and a full average yield. This has caused a depression in the market here, for the present, as the prices had prior to the last arrival, declined, but the last steamer, (the Alps) brings advices of a rally again, and some advance in grain had taken place.

Flour, Howard st. $7.12 a 7.25; City Mills, $7 to 7.25—Family Flour, $7.50, and Bakers do. $7—Rye Flour $7a7.25—Corn Meal, Balt. ground $4 per bbl., Pa. do. $4.25—Wheat, 135 a 145 cts. for fair to prime red, and 140 a 155 cts. for fair to prime white—choice parcels of white for family flour sold at 160c., Corn, prime white 65 a 67 cts., yellow, 72c. Rye, Pa. 123 a 125c., Md. 112 a 115. Oats Md. and Va., 50 a 52, Ohio 58, for very prime, and 53 a 54 for Pa. Oats. Cloverseed, $7 a 7.25. Timothyseed $3.75 a $4. Hay, baled, prime $18 a 20, and from wagons, $14 a 17 per ton. Straw, $14 for rye, and $10 for wheat. Sp. Turpentine, 52 a 55 cts. per gall., Tar, $3.50 a 3.75, Pitch, 2.37 a 2.50, Com. Rosin, 1.65 a 1.70, No. 2, 2.75, and No. 1, $2.50 a 3. Plaster, ton, 3.50 a 3.75, ground $1.25 a 1.37 per bbl. Hogs, $5.50 a 6.75 per 100 lbs. Cattle, beef, $2.50 a 4.25 on the hoof, equal to $5 a 8.25 net, and averaging $3.25 gross. Sheep, $3;50 per 100 lbs. gross. Veals, 4½ a 5, for prime. Sugar, N. O., $5.25 a 5.75, for fair as to quality, P. R. and Cuba, $5.25 a 5.75, for fair to good, and ord. to choice, $5 a 6.50. Wool, dull, unwashed 15 a 17, pulled 20 a 23, tub washed 24 a 57, com. fleece 23 a 25, and fine fleece 38 a 40 cents. Whiskey, 41c, in bbls., and hhds. at 40c. Tobacco, the demand is brisk, and shippers taking that is inspected. Md. inferior to common $5 a 6, good common to ord. $6.25 a 6.75, and good to fine brown $7 a 9, no Ohio in market.

Three Furrowed or Echelon Plow.

The ECHELON PLOW is the best constructed implement for Seeding or covering *Broadcasted Wheat with Guano.* The Castings are set to cut five inch furrows, and so regular is the performance, that Wheat thus covered resembles, and is nearly equally well seeded as by the Drill system.

The Figure represents our latest improved Plow. They are sold as follows, viz:

Nos. of Plows attached,	2	3	4	5
Prices, - - - - - -	$5,50	$6,50	$8,00	$10,00

The Three-Furrow Plow is in most general use. Those with 4 or 5 furrows preferred on light level lands.

ROBERT SINCLAIR, Jr. & CO.
Nos. 58, 60, and 62 Light St.

ANOTHER RESIDENT OF N. YORK CITY TESTIFIES TO THE GOOD EFFECTS OF
M'LANE'S CELEBRATED LIVER PILLS.
HEAR HIM!

New York, August 30, 1852.

☞This is to certify that I have had the Liver Complaint for five years, during which time I have tried almost all known remedies, but to no purpose. Hearing of Dr. M'Lane's Celebrated Liver Pills, I concluded to try a box, and am now almost cured. I think one box more will effect a permanent cure. I can cheerfully recommend these Pills to all who may suffer from liver complaint. I have also known them used with the most happy results in cases of sick headache or dyspepsia.

MR. SWIFT, No. 116 Attorney St.

P. S.—The above valuable remedy, also Dr M'Lane's Celebrated Vermifuge, can now be had at all respectable Drug Stores in this city.

☞Purchasers will please be careful to ask for and take none but Dr. M'Lane's Liver Pills.—There are other Pills, purporting to be Liver Pills, now before the public.

FACTS, WITHOUT COMMENT.
The Public Should Know them.

☞Mrs. Hardy, No. 119 Suffolk Street, writes us that she has been troubled with worms for some three years, and that she used one vial of Dr. M'Lane's celebrated Vermifuge, which brought away over 50 large worms. Her usual good health immediately returned.

Mrs. Quigby, No. 182 Essex Street, New York, under date of November 23, 1852, writes us that she had a child which had been unwell for better than two months. She procured a bottle of M'Lane's Vermifuge, and administered it. The child passed a large quantity of Worms, and in a few days was as hearty as ever it had been. Parents, with such testimony before them, should not hesitate when there is any reason to suspect worms, and lose no time in procuring and administering Dr. M'Lane's Vermifuge. It never fails, and is perfectly safe.

P. S.—This valuable preparation, also Dr. M'Lane's Vermifuge, can now be had at all respectable Drug Stores in this city.

☞Purchasers will please be careful to ask for, and take none but Dr. M'Lane's Vermifuge.—All others, in comparison, are worthless. Oct 1–1t

SEPARATOR.

This Machine threshes and cleans all kinds of grain in the most perfect manner. It is manufactured by the undersigned at their Works in Baltimore, and is considered superior to any machine for the above purpose. Persons wanting a machine to thresh and clean at one operation, need only to examine this to become satisfied of its superiority.

Price of Large size,	$200 00
" With Horse Power,	325 00
" Small size,	125 00
" With Horse Power,	250 00

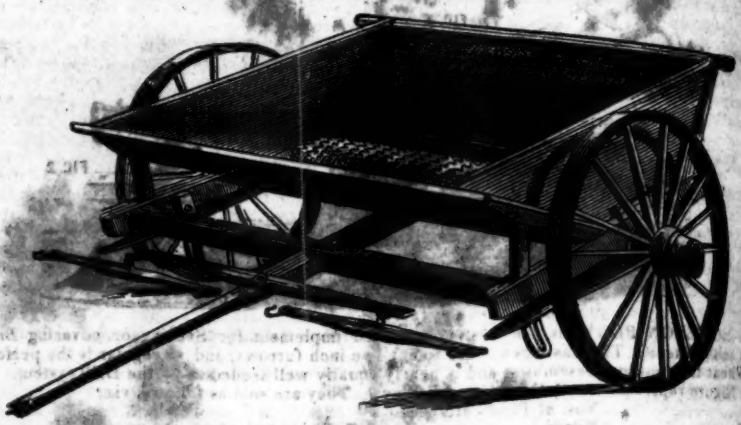
ZIMMERMAN & CO'S. HORSE POWER AND SEPARATOR will be furnished by us at their regular prices. jy 1.

WHEAT FANS! WHEAT FANS!

THE BAMBOROUGH WHEAT FANS, manufactured by us, are considered by the most intelligent and practical farmers of Maryland and Vargina, to be superior to any other Fan in use. Price,—$30, $32, and $34. E. WHITMAN & Co.

FURTHER IMPROVEMENTS.

COOPER'S PATENT LIME SPREADER!



THAT has given such general satisfaction, and was fully described in the American Farmer for September and October, has been so improved that they can be used to spread lime in quantities varying per acre from 2 bushels up to 200; also to sow Guano in quantities from 150 lbs. to any desired amount upward. They will crush all hard lumps of Guano at the same time it is distributing, and with such accuracy that in no other way can be excelled. Price $75.

He also makes machines exclusively for sowing Guano, Super-phosphate and other chemical Fertilizers, that are much lighter and cheaper, but will make as even work, and as speedy. Price $75.

All orders addressed to LEWIS COOPER, the Patentee, at Christiana P. O., Lancaster Co., Pa., will meet with prompt attention.

sep 1-3

Cooper's Patent Lime & Guano Spreaders.

We are Agents for Cooper's Patent Lime Spreader—Guano Spreader and Lime and Guano Spreaders combined.

PASCHALL, MORRIS & Co.
Agricultural and Seed Warehouse,
269 Market St., Philadelphia.

HALLADAY'S WIND ENGINE, the best machine for raising water by wind power in use.

PASCHALL, MORRIS & Co.
Agricultural Warehouse, N. E. Corner
sep. 1 7th & Market St., Philadelphia.

DEERING & DEDRICK'S HAY PRESSES. We are prepared to supply these excellent presses at a short notice. They are warranted.

PASCHALL, MORRIS & Co.
Agricultural Warehouse, N. E. Corner
sept 1 7th & Market St., Philadelphia.

SPAIN'S ATMOSPHERIC BARREL CHURNS We are now manufacturing these superior Churns of all sizes. They are warranted equal to any in use. PASCHALL, MORRIS & Co.
Agricultural Warehouse, No. 269 Market St.,
sept 1-1t Philadelphia.

PEACH TREES.—30,000 Peach Trees, thrifty growth and choice varieties; 3000 Cherry, also Apple and Pear Trees, Dwarf and Standard Strawberries, Raspberries, Gooseberries, Currants, and other small fruits in great variety.—Also a large assortment of Evergreen and Deciduous Trees and shrubbery, both native and foreign. Trees and plants shipped to any part of the Union, and delivered in Philadelphia free of cost for freight. ☞Catalogues furnished on application. PASCHALL, MORRIS & CO.
sept 1-3t Nurserymen and Florists, W. Chester, Pa.

FARMERS AND PLANTERS DEPOT.

N. E. Corner 7th and Market St., Philadelphia.

THE most varied assortment of *Agricultural and Horticultural Implements, Seeds, Dairy Utensils, Fruit and Ornamental Trees, &c.*, in the United States, may now be seen at our Warehouse, and to which we respectfully inviet the attention of Farmers and Planters. It having been our earnest endeavor to secure custom, by keeping only the most improved and *best made* implements, we guarantee all articles sold by us, *fully equal* to representations. Orders from a distance as punctually and faithfully filled, as if the purchaser were present. We have but one price, to which we strictly adhere.

Comprehensive Illustrated *Catalogues*, will be furnished gratis, on post paid application.

PASCHALL, MORRIS & Co.
Agricultural Warehouse,
se 1 N. E. Cor. 7th & Market St., Philadelphia.

Mexican Guano.

HAYWOOD, Sept. 23d, 1850.

CHARLES R. PEARCE, Esq.—Dear Sir:—I tried some experiments with a portion of the Mexican Guano that I purchased of you last Spring, and find the Mexican to produce a better crop of corn than where I used Peruvian Guano alone, and according to promise send you the result.

I took a lot of six acres, (the soil of uniform quality,) and applied 300 lbs. of Peruvian to one acre, 300 lbs. of Mexican to another, and 200 lbs. of Mexican and 100 lbs. of Peruvian per acre to the other four. The corn on the acre where Mexican alone was applied, stood the very severe drought this summer better, and will produce from 12 to 15 bushels more than either of the other acres. The crop on the four acres where the Mexican and Peruvian mixed was used, is better than the acre on which the Peruvian alone was used.

Very respectfully, your obedient serv't.
oct 1-1t BENJ. WILLIAMS.

REMOVAL.

ON THE FIRST OF JULY, 1854, WE REMOVED TO OUR

New Agricultural Implement, Seed & Machine Store,

IN EXCHANGE PLACE,

Where we have secured one of the largest and most commodious Warehouses in the city.

The increase of trade has made it necessary that we should seek a place better adapted to our business, and we have selected the above as being more central, and we trust, more convenient for our customers. In addition to the main warehouse, we are erecting a large storehouse in the rear, which, for convenience, we think, cannot be surpassed in this country.

We are now receiving a large stock of new Implements, Machines, &c., at the New Store, where we shall be happy to see our customers when they visit Baltimore. Orders by mail will be promptly attended to by addressing

E. WHITMAN & CO.,

E. WHITMAN, }
E. W. ROBINSON. } No. 63 EXCHANGE PLACE, BALTIMORE, Md.

BALTIMORE, July 1st, 1854.

E. WHITMAN & CO'S.

Improved Premium Hay Presses.

PRICES:	No. 0—Weight of Bale about 150 lbs,		$85 00
	" 1— " " " 200 lbs.		100 00
	" 2— " " " 250 lbs.		115 00
	" 3— " " " 300 lbs.		130 00

PREMIUMS.

THE MARYLAND STATE AGRICULTURAL SOCIETY awarded E. Whitman & Co. the Highest Prize in 1850, for their HAY PRESSES, and $20, the Highest Prize, again 1851.

THE PENNSYLVANIA STATE AGRICULTURAL SOCIETY also awarded them $20, the Highest Prize, for their Hay Presses, in 1851. And again, at the

Great Trial at Hayfields, in September, 1852,

The MARYLAND State Agricultural Society awarded to JOHN MERRYMAN, Jr. Esq. the Great Prize of $50 for one of E. Whitman & Co's. Manufacture of Hay Presses.

☞ Since the above awards were made, we have greatly improved this Press, and have no hesitation in recommending them as being far superior to all others manufactured in this country.

☞ An extensive farmer in Georgia, C. Austin, Esq., writes us September 9, 1854, as follows, "My Hay Press performs well, and I would not be without it for twice its cost."

We have sold a large number of these Presses, and are continually receiving such evidences of their utility as the above.

We are now prepared to furnish all the various sizes of this Press, and invite those in want of the best machine to call and examine them at our

New Store, No. 63 Exchange Place.

E. WHITMAN & CO.

ONE DOLLAR AND TWENTY FIVE CENTS.

ELLIOTT'S FRUIT BOOK,

OR, THE AMERICAN FRUIT GROWERS' GUIDE IN THE ORCHARD AND GARDEN.

SENT FREE OF POSTAGE.

"A large number of Western Apples and other Fruits are described in this book, which are not found in other works of the kind; and the remarks on the selection of varieties for western culture, propagation, management, &c., as far as we have had time to examine seem to us judicious and valuable. Every nurseryman and fruit grower, especially in Ohio and the Western States should procure a copy."—Ohio Cultivator.

"But the chief value of the book lies in its practical details—in its classifications and specifications of the different varieties, with the peculiarities they present, and the different methods of training they require. This branch of the subject which is very full, is copiously illustrated by drawings."—Phila. North American.

"It is a book that every farmer and fruit grower may profitably read."—Rochester Daily American.

"As Mr. Elliott resides in Cleveland he is much better acquainted with what fruits are adapted to the Central States than horticulturists or pomologists who reside on or near the Atlantic seaboard. This fact gives the work great additional value to those who are engaged in cultivating fruit in the Mississippi valley."—Democratic Press, Chicago.

"Elliot's Fruit Book," is the most direct and practical of any treatise that has fallen under our observation; clear and minute in its directions, both as to modes of culture and qualities of the different kinds and varieties of fruit. We recommend its purchase as an investment that will speedily return many hundred fold."—Binghampton Democrat.

It contains much matter of practical value to fruit growers in the new States.—Rural New Yorker.

"The great mass of the matter is marked with correctness and with much knowledge of Fruits, and the work will of course stand at the head, so far as its descriptions of Western varieties are concerned; and as such we strongly recommend it to the fruit raising portion of the community."—Country Gentleman.

"This work, from the examination we have been able to make, will probably be found one of the best works on Pomology yet published. The author has had the aid of many of the best fruit growers of this country, and gives drawings of numerous varieties of each class of fruit."—American Farmer.

Mr. Elliot has long been known as a practical horticulturist and as an able writer on pomology."—Boston Cultivator.

"It embodies all the latest important information pertaining to fruit culture, and we can recommend it as a thorough and reliable work got up for its intrinsic worth, not for speculation."—Northern Farmer.

"Such a book cannot fail to secure a ready and extensive sale in every part of the country.—Godey's Lady's Book.

"Mr. Elliot is definite in his descriptions, and a man of experience in the culture of Fruits in the orchard and Garden, and favorbly known."—Maine Farmer.

"Mr. Elliot has rendered an acceptable service to the cause of horticulture."—Practical Farmer.

"From what we have seen and read, we cannot hesitate in recommending it as in many respects the most complete and valuable book of the kind in existence. The descriptions of Fruit are full, clear and methodical; and the illustrations of the best order—not mere outlines—but full, or half sectional figures, with cores, seeds, &c., as true to nature as we have ever seen. The book cannot fail of being useful in a high degree."—Prairie Farmer.

"The author of this work now before us has given us a very valuable work on the cultivation of Fruits. He was amply qualified to do so, having been for ten years engaged in "the nurturing of trees and noting their products."—Michigan Farmer.

oct 1-1t C. M. SAXTON, Publisher, 152 Fulton St.

Strawberry Culture.

A COMPLETE MANUAL for the Cultivation of the Strawberry; with a description of the best varieties. Also notices of the Raspberry, Blackberry, Currant, Gooseberry, and Grape; with directions for their cultivation, and the selection of the best varieties. "Every process has been proved, the plans of others tried, and the result here given."—By R. G. PARDEE. With a valuable appendix, containing the observations and experience of some of the most successful cultivators of these fruits in our country.—Price 50 cts. and sent free of postage. Published by C. M. SAXTON, Agricultural Book Publisher, No. 152 Fulton St. N. Y. oct 1-1t

CHANDLER'S CRACKLINGS, OR GREAVES.—Farmers wishing a supply of these either for manure or feeding stock, can be supplied now, on application at this office. oct 1-1t

Phosphorated Guano!

OFFICE, No. 8 BOWLY'S WHARF, (NEAR PRATT STREET,) BALTIMORE.

THIS valuable Fertilizer, composed of 1-3 calcined bones reduced to powder, and 1-3 Peruvian Guano. The bones of which it is composed, in this state, contain at least 35 per cent. of Phosphoric Acid, and the Peruvian Guano 16 per cent. of Ammonia.

As it is now a well established fact, that Phosphoric Acid and Ammonia are the agents necessary for nearly all unproductive soils; and as the undersigned will *warrant* the per centage of Phosphoric Acid and Ammonia, and also the proportion of those agents in the composition as above specified, he can with entire confidence recommend this Manure to the Agricultural community. The proportion of 2-3 calcined bones to 1-3 Peruvian Guano is recommended by our State Agricultural Chemist, as best adapted to meet the deficiencies of most soils. By the application of this manure, the speedy action of Peruvian Guano is obtained, and also the more enduring and beneficial effects resulting from the Phosphoric Acid of the bones.

This article is offered for sale by the Manufacturer in bags containing about 160 lbs. at $45 per ton. Also calcined bones at $28 per ton.

DIRECTIONS FOR USE. For Wheat or grain Crops, 200 to 300 lbs. per acre, harrowed, ploughed, or drilled in with the grain; or in any way thoroughly intixed with the soil. For corn, tobacco, potatoes, &c., 2 ounces or 2-3 of a gill to each hill. oct 1-1y N. E. BERRY.

Hedges from the Maclura or Osage Orange.

PITKIN'S SEED AND PLANTS.

IN consequence of so large a portion of the Seed of commerce proving worthless, my seed is gathered and preserved under my immediate care and direction, or that of an experienced agent, so that it can be relied upon as fresh and genuine.

I have growing in nurseries East and West, some 4,000,000 plants, ready for setting in hedges the coming spring; the tops being cut off, the roots can be packed in small compass and sent to any part of the country with safety, and little expense. Price for No. 1 plants $10 per 1000. A very liberal discount made to large purchasers; no charge for packing. Early orders solicited, as last season all our plants were engaged by the 1st of January.

A descriptive pamphlet containing full directions for planting, early setting and rearing hedge, &c., sent to purchasers.

Address H. W. PITKIN,
oct 1-6t Manchester, Conn.

J. THOMSON LAWS,

No. 138 BALTIMORE STREET,

A doors West of Md. Agricultural Society's Rooms,

HAS on hand and for sale on reasonable terms, *FINE GOLD WATCHES, ELEGANT JEWELRY* of the latest and most fashionable styles, also *SILVER SPOONS*, &c., &c.; also a great variety of *GOLD PENS, PENCILS*, &c., &c. oct 1-3t

10,000 PLOUGHS, HARROWS & CULTIVATORS—at prices as low as can be had in the United States, and of superior quality. E. WHITMAN & CO.
oct 1-1t

CONTENTS OF THE OCTOBER NUMBER.

Report on Agricultural College and Experimental Farm,	97	Cattle Shows,	113, 115
Injury to Rice Crops,	101	Fruit Trees,	113
Sale of Short Horns,	101	Large crop from poor land,	113
Farm Work for October,	102	Useful Investigations,	113
Garden do. do.	105	Monument to Downing,	113
Comstock's Terra Culture,	106	Wire Grass by W. D. G.	113
Wire Grass, by Agricola,	108	A Munificent Donation,	114
Curing Bacon,	108	Mulching Fruit Trees,	114
The Oregon Pea,	109	How to Plant a Garden,	115
Guano on Cotton,	109	Willow Culture,	115
The Curculio,	109	What a Crop Carries off,	115
State of the Crops,	110	Bones as Manure,	116
The Late Harvest,	110	Classification of Manures,	116
Flax Culture,	110, 112	Floral, for October,	121
The Wheat Crop in Va.	111	Action of Lime,	121
The Cattle Show,	112	Public Benefactor,	121
Agricultural College,	112	Importation of Sheep,	122
Trial of Reapers,	112	Sheep Raising in Va.	122
Death of Cattle,	112	Greenbriar Ag. Fair,	123
The Corn Crop,	112	Moles,	124
		Baltimore Market,	124